

# THE NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE  
BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

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## Looking Forward

TWO significant features looking toward the acceleration of physical recovery in schools are embodied in the recent decision made by Colonel H. M. Waite of the Federal Public Works Administration to allow 30 per cent federal aid for the maintenance and rehabilitation of school plants and willingness to make reasonable loan allowances on delinquent taxes. This is significant from the federal as well as from the local viewpoint. Districts will be enabled, without borrowing money, to consider their current budget allowances for upkeep as 70 per cent and to secure an additional 30 per cent from federal funds.

While the amount is relatively small it will enable the local districts to catch up slightly on neglected repairs. From the national standpoint it permits the quick return of these appropriations to circulation through the immediate employment of additional labor. Loans on delinquent taxes will permit the purchase of needed textbooks and other teaching equipment. Applications for both types of aid must be made in the regular manner through authorized state channels. Refusal on the part of state authorities to allow and present these needs should be reported directly to the P. W. A. commission at Washington.

EXCEPT when funds may be secured without recourse to borrowing, the aid provided under the current Public Works Acts on the 30-70 basis for new buildings and additions to existing plants should be considered carefully by local school districts before commitments are made. Unless such an appropriation can be used within

the next thirty days it will represent not real aid but merely the differential between current construction prices and those that will prevail after the first of the year under the new wage scales.

It is impossible for local districts, unless they have pursued intelligent financial policies in the past by paying as they built their plants, to accept the federal offer without going further into debt. Since the existing debt burden is one of the significant causes for present curtailment of instruction, rather than some of the more emotional issues that have been raised by the profession, further borrowing will only increase the plight of schools.

In my estimation it is practically folly for local districts to borrow money now, even if the people were willing to vote it. To add to the existing debt burden is a dubious procedure. School districts are urged to proceed cautiously. The chief possibility under the current act lies in the federal monies that it makes available for upkeep and rehabilitation as a supplement to appropriations already allowed through taxation.

THE hope for aid to the school plant as a part of the public works program to put men back to work quickly lies in the second public works act which will be brought before the new congress in January. At that time the ratio of federal to local funds will undoubtedly be changed. It may be 50-50 and it may even be 70-30, exactly the reverse of the present. The proportion will be determined by the way the several states present and declare their public works need.

I believe there are two factors to be given immediate consideration by the profession and to be programmed carefully by states in anticipation of the new bill. The first of these is rehabilitation. With the rapid tendency of population towards a point

of stabilization the immediate general need is toward the improvement and development of existing plants, rather than the development of a tremendous boom in new buildings. Except in certain centers, it is highly desirable to proceed slowly with expansion unless a painstaking and scientific survey really indicates definite need.

Existing plants have been shamefully neglected during the past three years. Even before 1929 it was the custom to overlook essentials in upkeep if funds happened to be short. Maintenance was the first item cut. What has happened since 1929 is obvious even to a layman. A conservative estimate based on a recent high-spot survey indicates the need for the immediate expenditure of at least \$150,000,000 for repairs and replacements to catch up with 1929. Another \$50,000,000 is required to eliminate deficiencies in artificial lighting, heating, ventilation and sanitation. Another \$50,000,000 is conservatively estimated as the amount needed to bring textbooks and library books back to merely a modest effectiveness. Equipment, or movable furniture, must be replaced and modernized. In this field another \$50,000,000 might be used. In my opinion, derived from survey reports by school districts and states and from inspection by field representatives, a total of \$300,000,000 is needed to protect the existing capital investment and to provide essential equipment and supplies.

IT IS certainly possible to place this case convincingly before the new congress. As a work providing program, it is the quickest means of developing immediate purchasing power. More than half of the primary expenditure would go directly to labor without long waits for the work to get started. Approximately half of the secondary services, books, supplies and equipment, would accrue to labor. From the standpoint of national economy it is as necessary to keep essential activities from going out of business and causing greater unemployment as it is to provide temporary employment for unskilled workers. Public education has a real contribution to make toward unemployment. What happens in the next congress depends on the profession.

AS SIGNIFICANT to education as the early discoveries in the field of intelligence is the publication of a recent book by an eminent internist and endocrinologist entitled "What We Are and Why." Written in popular, non-technical style and graphically illustrated with numerous life histories, it represents a first at-

tempt to bring before educators and the laity in general the significance of endocrine glands on personality and certain types of behavior problems. It has many implications to the slowly developing science of education for it opens a new field of approach and diagnosis that has heretofore scarcely been hinted at.

The general importance of the endocrine glands in developing personality was brought to our attention by Dr. Edward Huntington Williams in 1926 but the causes and results of glandular disturbances have been hidden behind a veil until Dr. Laurence H. Mayers courageously placed some of his extensive clinical experiences in published form. It should be the book of the year so far as education is concerned. I hope that every superintendent, principal, teacher and nurse will read it. The book is published by Sears, New York City.

UNDER no system of government and under no conditions will it be possible to provide security for the teaching profession except in terms of function and on the basis of efficiency in achievement. Certain movements toward the development of a system of personnel tenure that provides full protection for the teacher and practically none for society are therefore doomed to failure because they are wrong in principle. Relative security may be attained if employment is conditioned on the continuity of effectiveness in service. Tenure must be developed on the principle of continuity rather than on the assumption of permanence. There is a vital difference. Safety of this type may be attained through legislative enactment or through the development of a tradition toward it. A combination of the two may be the happy mean. Statute enactment may be secured through strong arm pressure but means of evasion will be discovered unless there is definite public opinion behind such enactments. Legislative action may reasonably follow the development of a public feeling of need.

HAVE you read Nelson Antrim Crawford's "Lady Cops in Cap and Gown" in the October *American Mercury*? It's a good mirror of certain tendencies that are beginning to filter into secondary school administration. Read it, laugh heartily and let a little sane humor season your appraisal of these activities in your local school system.

The Editor

# Automatic Light Control Is Needed in the Modern School

*It is impossible for teachers to tell whether there is sufficient light in a room. Automatic light control equipment, however, is foolproof. It saves the pupils' eyes and prevents waste of current*

By FRED W. FROSTIC, Superintendent of Schools, Wyandotte, Mich.

THE sense of sight is the most important avenue through which the normal pupil receives impressions in the educative process. The complex operation of seeing is dependent upon vision and illumination. Objects are seen clearly in proportion to the acuity of vision and the illumination of those objects and their surroundings.

While the human eye is perhaps the most complex and highly developed organ of seeing in the animal world, it is, at the same time, the most easily impaired by undue strain or disease. Eye fatigue is due commonly to improper lighting which slows up the visual process and induces strain. Long continued eye strain on the part of a pupil results in impaired vision, reduced rate of progress in work, lowered efficiency, repetition of grades and discouragement of effort.

Acuity of vision may be controlled and improved by appropriate lenses. Lighting may be controlled and improved with respect to all of its elements. Modern building science and engineering efficiency in artificial lighting have placed within reach the means of controlling the quantity, the distribution, the direction, the diffusion and the spectral character of light.

## *The Eye Is a Poor Judge of Light Values*

Adequate school lighting may be defined as that continuous status of illumination within which the human eye can function with the highest possible efficiency with the least possible fatigue under normal conditions. Under such conditions the worker is least aware of the factor of illumination since the balance of quantity, distribution, direction, diffusion and spectral character are neither unusual nor lacking.

Continuity in the status of illumination is here emphasized, because, while the human eye rapidly adjusts itself to changes in illumination, the character of school work tends to limit this range

of adaptability and make strain and fatigue with their harmful results more apparent. It is this same ability of the eye to adjust itself to variations in the illumination factor that makes the eye an unreliable judge of the efficiency of lighting. The average individual is far more able to judge normal temperature fluctuations than he is to judge adequate lighting conditions. If the temperature in the average school room drops more than four or five degrees below normal it is noticed at once and there is a call for heat. The illumination of the room, however, may fall far below ten foot candles without the fact becoming noticeable.

Fig. 1 and Fig. 2 illustrate unsatisfactory lighting conditions in two schoolrooms that were accepted by teachers as normal, evidenced by the fact that no artificial light was used. These teachers, although considerably above the average in general ability, were clearly unaware of the con-

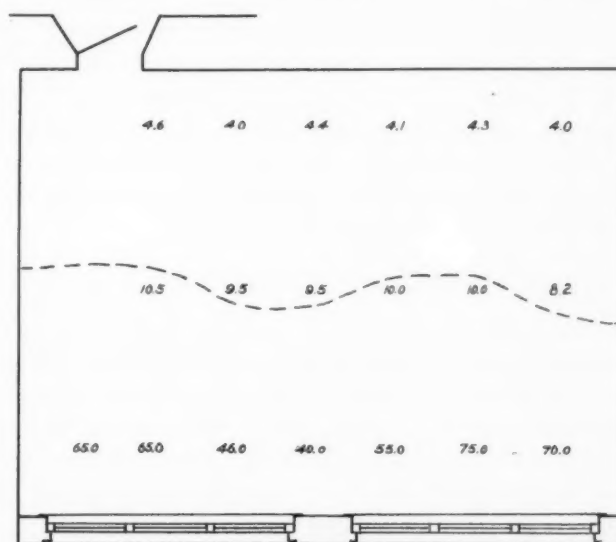


Fig. 1. Foot candles of illumination at the working surfaces of desks. Sky completely overcast and raining. Time, 9 a.m. North orientation. Values below 10 foot candles as indicated by the broken line are insufficiently lighted.



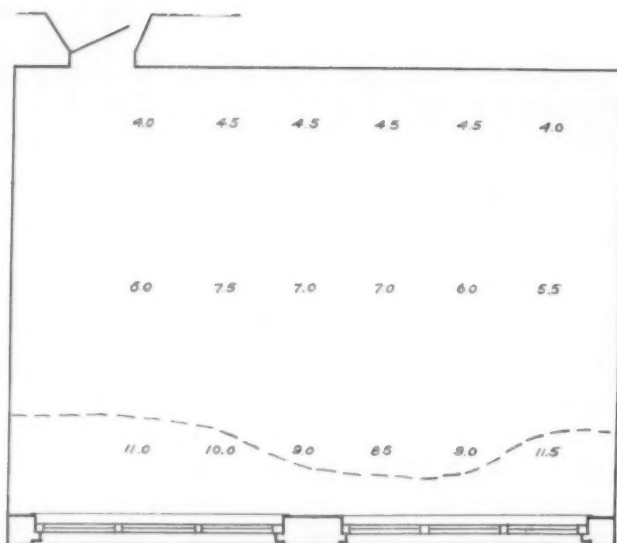


Fig. 2. Foot candles of illumination at the working surfaces of desks. Sky completely overcast and raining. Time, 8:30 a.m. South orientation. This represents conditions on the same morning as that of Fig. 1.

ditions that were producing a high degree of eye-strain among pupils in these rooms.

Table I and Table II each illustrate conditions in two pairs of identical rooms observed on a gray day when light values on the dark side working surfaces of the rooms were below ten foot candles. The natural and artificial lighting conditions in the rooms compared in each table were identical.

The data in the two tables illustrate the common inability of human beings to determine illumination values accurately. The fact that natural illumination often fluctuates more widely than room heat makes it difficult for those in charge of rooms to adjust conditions to meet light changes. Fig. 3 illustrates how rapidly light changes occur during a sixteen-minute period on the bright side of a room at one-minute intervals on a rainy day. Fig. 4 illustrates the light changes at five-minute intervals at two working surfaces on a cloudy day with continuous rain. Fig. 5 shows the light changes at five-minute intervals during a bright day.

#### *Automatic Light Control Is Essential*

For many years room heating has been controlled by automatic thermostatic devices. These instruments have been refined and their service extended so that their specification is no longer questioned in school buildings. Automatic heat control is considered a necessity in all types of buildings where uniform heat conditions are desirable. No modern home heating unit is considered complete without such control. Uniform automatic control of clocks has also become universal. Only recently, however, has it been recog-

nized that similar automatic control of lighting is necessary, desirable and possible.

The recent perfection of the photo-electric relay and the illumination meter have made possible for light control what the thermostat and thermometer have done for heat control.

The photo-electric relay turns on and off the lights in a room or group of rooms automatically, using as its operating means the light intensity within the room or the light intensity entering the room from the outside. The intensity at which the relay is set to turn the lights on or off is determined by the use of the illumination meter, which is a highly sensitive type of photometer using two photo cells for differentiation in readings.

While the photo-electric relay has a capacity large enough to operate the lights in an ordinary classroom the cost of a photo cell for each room is an unnecessary if not a prohibitive expense. By the use of larger relay switches, which can be actuated by the photo-electric relay, any number of rooms requiring the same range of illumination

Fig. 3 (Below). One-minute observations (foot candles) on the window side of a room of north orientation, from 12:55 p.m. to 1:11 p.m. Sky heavily overcast and raining. This curve is a part of the curve of Fig. 4

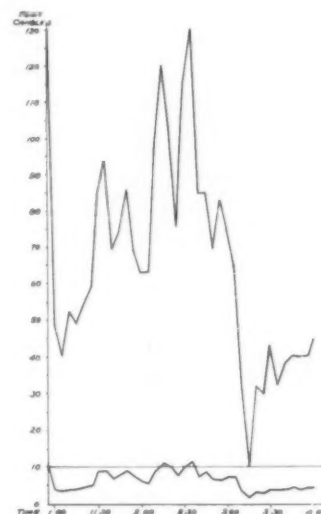
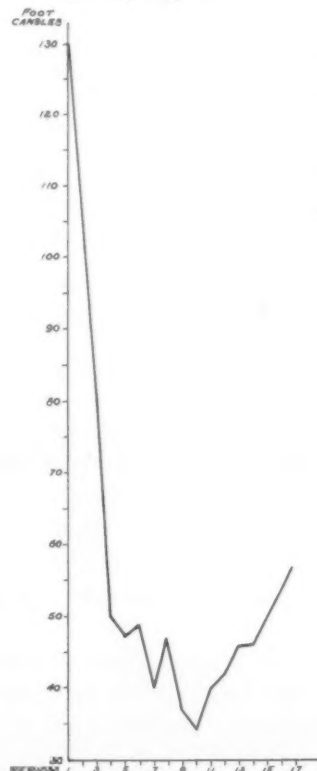


Fig. 4 (Above). Light distribution in a room of north orientation with a completely overcast sky and continuous rain. The upper curve represents light values at a desk on the window side of the room; the lower curve, at a desk on the wall side of the room. Illumination below 10 foot candles is considered deficient.



can be connected to the same relay switch or circuit breaker.

The installation of this equipment in the Garfield Elementary School, Wyandotte, Mich., was described briefly in the October number of *The Nation's Schools*. The building being used for experimental light control is approximately 279 feet long by 104 feet deep of the I type. The

TABLE I—HALF-HOUR OBSERVATIONS ON THE USE OF ARTIFICIAL LIGHTS IN TWO IDENTICAL HOME ROOMS BY THE SAME TEACHERS DURING THE ENTIRE DAY.  
SOUTH ORIENTATION

Time	Room 201	Room 203
9:00	Off	On
9:30	On	On
10:00	On	On
10:30	On	On
11:00	Off	Off*
11:30	Off	Off*
1:00	Off	Off*
1:30	Off	Off*
2:00	Off	Off*
2:30	Off	Off*
3:00	Off	Off*
3:30	Off	Off*

\*Indicates that shades were at the top of the windows. In all other cases the shades were at the half-way point, drawn from the top.

building is two stories high and has a south orientation. It has a cubage of 834,400 feet. It is designed for a twenty-section semidepartmentalized type of organization. Construction units are 15 feet wide by 22 feet deep. Two such units comprise an ordinary home room, and three units are combined for an art room or library. The window stools are 2 feet 9½ inches from the floor, and the plaster opening is within 3 inches of the ceiling. The windows are arranged in two banks with narrow mullions, the pier in the center of a two-unit room being 3 feet wide. The ratio of window area to floor area is approximately 1 to 3.2.

Artificial lighting consists of six units of 200 watts each in home rooms 30 by 22 feet. Each lighting unit is of the reflex type of glassware, 14 inches in diameter by 9 inches deep. These units are manually controlled by a single toggle switch on the operating board just inside the room entrance door. Three-unit rooms have two toggle switches controlling the lights in two gangs, one on the window side of the room and one on the side opposite the windows.

The lighting in all classrooms, home rooms, and corridors is controlled by three photo-electric relays, A, B and C. Relay A controls all the rooms on the south orientation, Relay B controls all the rooms on the north orientation and Relay C controls the corridor lighting.

The photo-electric relays are recessed into the wall opposite the window openings in selected rooms, with the relay window opening 7½ feet

above the floor. The corridor relay is midway in the corridor at the same height.

Conduit lines lead from the photo-electric relays to three remote controlled switches, or circuit breakers, having capacities of 60, 100 and 200 amperes, respectively. The room and corridor loads are distributed between these three circuit breakers. Each room has its manual control switch for lights the same as in the ordinary layout. There are three small momentary contact switches in the principal's office, one for each of the circuits controlled by the three photo-electric relays. Each contact switch has three points, which makes it possible to produce three different conditions on each circuit, according to the particular requirements of the moment:

1. The entire group of circuits may be placed on manual control so that each room will operate as a separate unit.

2. The entire group of circuits may be placed on photo-electric control so that the lights will operate automatically.

3. The entire group of circuits may be turned off so that the circuits will be dead.

In actual operation, the contact switches are turned on "automatic control" when school opens in the morning. Every room then receives light as needed and when natural illumination becomes sufficient the lights turn off automatically. They turn on again, however, when the illumination falls below the critical point set. If a room is not in use, the lights may be turned off at the regular room switch manually, thus avoiding waste of

TABLE II—HALF-HOUR OBSERVATIONS ON THE USE OF ARTIFICIAL LIGHTS IN TWO IDENTICAL HOME ROOMS BY THE SAME TEACHERS DURING THE ENTIRE DAY.  
WEST ORIENTATION

Time	Room 113	Room 115
9:00	On	On
9:30	On	On
10:00	Off*	On*
10:30	Off*	On*
11:00	Off*	On*
11:30	Off*	On*
1:00	Off*	On*
1:30	Off*	On*
2:00	Off*	On*
2:30	Off*	On*
3:00	Off*	On*
3:30	Off*	On*

\*Indicates that shades were at the top of the windows. In all other cases the shades were at the half-way point, drawn from the top.

current. However, if the photo-electric relay is not calling for light, the light cannot be turned on at the room switch.

The contact switches in the principal's office are turned on "manual control" at the close of the day's session. This means that only such rooms as are in use after the session will be using light. All circuits except the emergency lighting are

turned off when the building is closed for the night.

Some question may be raised as to the necessity of separate photo-electric relays for north and south exposures. Contrary to general opinion, with equal window area and floor window ratios, there is less demand in northern latitudes for artificial lighting on a north exposure than on a south exposure, due to better diffusion of light. Tests conducted at the Garfield Elementary School have proved this to be true. An electric clock was

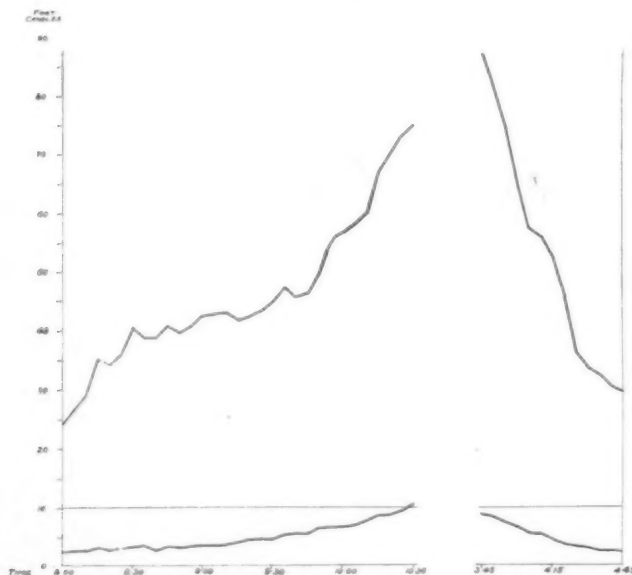


Fig. 5. Light distribution in a room of south orientation on a clear day. The upper curve shows light values at a desk on the window side; the lower curve, at a desk on the wall side. During the interval between 10:30 a.m. and 3:45 p.m. satisfactory illumination throughout the room was maintained.

connected to each circuit so that whenever the lights were "on" the clock would record the number of minutes or hours of use. The clock was regulated to stop when the lights turned off and to start when they turned on again.

In a test conducted on a typical overcast day, lights on the north exposure were in use for one hour and thirty-five minutes, while lights on the south exposure were in use for six hours and five minutes. The lights on the north exposure burned during the following periods: 8:15 a.m. to 9:06 a.m., 2:10 p.m. to 2:20 p.m., and 3:16 p.m. to 3:50 p.m. The lights on the south exposure burned during the following periods: 8:15 a.m. to 11:30 a.m., and 1:00 p.m. to 3:50 p.m.

Local conditions, such as trees, the nearness of other buildings, smoke, use of shades and condition of the window glass affect the relative demand for light and may make certain orientations use more light than they normally would.

The setting and checking of the photo-electric

relay is of prime importance. If ten foot candles are set as the minimum of illumination for a working surface, this should be applied to the darkest working surface of the room. This will ensure a minimum of ten foot candles of illumination for every pupil. The photo-electric relay may then be set to turn the lights off when the value reaches eleven foot candles or any other desired point.

Economy in lighting is desirable, but economy should mean control over needless waste of current. Manual control, even under constant supervision, often results in waste of current. It is not uncommon to find lights burning in direct sunshine. Too great pressure from administrators in the interest of economy, usually results in inefficient use of artificial light and consequent damage to pupils' eyesight.

The question is often asked, will automatic control of lights save money? That depends upon conditions. If there has been an honest effort to provide pupils with an adequate amount of light, or if there has been a large waste of current when not needed, there will be a marked saving with automatic control. If, however, pupils have been deprived habitually of the necessary amount of illumination, there will be no saving in electric current cost if the control relay is set to give an adequate amount of light. The cost of installation in such a building as described above is approximately \$500. The ultimate saving to pupils' eyesight is incalculable.

## Results of Pupil Participation in School Control

The development of mere mental acumen and mechanical skills has been subordinated to the greater task of building pupils' attitudes and habits into character and citizenship at Lincoln Junior High School, Canton, Ohio, according to Carl H. Meyer, principal.

To accomplish this a program was set up within the school day and with school credit, reversing the order of stress usually obtaining in the regular curricular program. In this set-up, citizenship is placed first rather than scholarship.

The organization of the home room and student council is the backbone of the program. Through these organizations the many activities, usually designated as extracurricular, are developed. An award system for recognition on an equal plane of merit in scholarship, citizenship and athletics has been developed.

An evaluation of the success of the plan through questionnaires over a period of years reveals a steady growth in results. As further evidence, an increase in four years of over 100 per cent in the number of citizenship awards is cited. A follow-up of former pupils also indicates that the influence of this citizenship training carries over into actual life situations.

# A Sound Finance Program Will Save the Public Schools

By JOHN K. NORTON, Professor of Education, Teachers College, Columbia University

THE difficulties in financing education that are being encountered in the present crisis are due to two major causes.<sup>1</sup> First, the general economic paralysis that began in 1929 has sharply reduced income, with resulting restriction upon expenditures, both public and private. This first factor is beyond the control of educators as a group. They may cooperate with the national administration and with other agencies and forces striving to bring about general economic recovery. The educational forces, however, are but one of a large number of groups that must cooperate intelligently and actively if economic rehabilitation is to be achieved.

The other factor operating to reduce financial support available for schools and colleges is the inefficient system by which education is financed in the United States. This second cause, less generally recognized, is none the less influential. In fact, in some communities it deserves to take equal rank with the depression itself as a cause of the current financial crisis in education. This second factor is of peculiar significance to state school executives. It is something that an intelligent and courageous educational leadership can do something about. In fact, if the inefficient and inequitable schemes of financing schools and colleges in the United States are to be reformed, this reform will be brought about primarily through such leadership.

May I suggest that the current crisis confronting education offers a double obligation for vigorous action concerning methods of financing public schools and colleges? Such action will tend to re-

move one of the underlying causes of the current breakdown of educational support. Equally important, the current emergency presents a peculiarly favorable time for securing constructive legislation for school support. The very seriousness of the educational emergency is requiring citizens of many states to choose between abandoning the essential principles upon which free public education has been developed in this country and substantially rebuilding the financial structure upon which rests school support.

I believe that there is not a state in the Union that will choose the first of these alternatives if educational leadership presents courageously and clearly the issues involved. In fact, already several states have surprised even educators as to the extent to which they will go in rebuilding their systems of school finance when such rebuilding has been recognized as prerequisite to the continuance of free public education.

*The report of the National Conference on the Financing of Education has just come from the press. This report is the outcome of two weeks of intensive work by a group of twenty-seven leaders in school administration and public finance who came together during the first part of August under the auspices of the Joint Commission on the Emergency in Education*

The report of the National Conference on the Financing of Education is presented, therefore, as a document of immediate and emergency significance. It is true that many of the principles and procedures recommended in this report are of more than ephemeral importance. This does not mean, however, that the report should be looked upon as a basis of future rather than immediate action. The report deserves immediate study and may

properly become the basis of programs of administrative and legislative action aimed at the most difficult of the current financial problems confronting education.

Varying conditions existing in different states will, of course, require modifications of the

<sup>1</sup>Report of National Conference on the Financing of Education, Department of Superintendence, Washington, D. C., 1933.



financial principles, policies and procedures recommended in the report. These necessary modifications, however, whether required by peculiar local conditions or by political expediency, should not discourage general advance in every state toward the financial objectives defined in the report.

At the outset the report defines the scope of the educational program to be financed. It calls for the development of a system of public education adequate to meet the demands of the rapidly changing American scene of 1933. It suggests a reappraisal of the purposes, scope and procedures of public education in the light of current economic, political and social conditions as the only sound basis upon which to build an intelligent policy for the financing of public schools and colleges. It states that funds to provide every individual a complete educational opportunity from early childhood to the age at which employment is possible and socially desirable should be made available and should constitute an inalienable claim on the resources of local, state and national governments. The report goes further and urges that educational opportunities should be provided at public expense for adults of all types when such opportunities are required in the public interest.

The unique and complex task of the American school can be accomplished only through teachers who have not only broad understanding of the fields of knowledge but also appreciation of their unique rôle in improving civilization. On this basis, the report recommends a thoroughgoing reconsideration of the economic, social and cultural place that teachers should be expected to occupy, similar to that now being given to the wage situation in industry and to the income of the farm population.

#### *Need for Efficient Personnel Stressed*

The conference paid particular attention to the rôle of the state government in the financing of education. It was stated as a principle of prepotent importance that the state should provide sufficient financial support for every school district to permit the maintenance of an acceptable foundation program of education on an equal tax rate and to relieve the local property tax when this tax carries an unfair share of the cost of government.

It was also emphasized that it will be possible for the state to discharge its financial responsibility properly only if adequate facilities are provided for the employment of sufficient and competent personnel in every state department of education. From such departments must come the statesmanlike leadership and the technical guidance essential to the establishment of a proper foundation pro-

gram of education in every community and to the encouragement of continuous educational progress throughout the state. No state can expect a long time financial plan for public education, comprehensive in scope, based on experienced judgment and objective data, cooperatively developed, continually subject to review and revision and reflecting faithfully the educational policy of its people unless it provides for the maintenance and continuity of service of an adequate personnel in its state department of education.

#### *The First Task Is the Tax Problem*

The conference gave particular attention to the relation of the educational emergency to taxation. Advised by specialists in this field, it pointed out that the financial emergency now faced by the schools is the result, on the one hand, of the collapse in many sections of the country of the tax sources and the tax machinery upon which educational support depends and, on the other hand, of indiscriminate efforts to enforce reductions in public expenditures without due attention to the maintenance of essential governmental services.

In considering the first of these difficulties, it is stated that any effective effort toward meeting the present emergency of the schools must begin with rehabilitating the property tax, the principal source of school support, or, as an alternative, finding adequate substitutes and supplements for it.

Delinquency of taxes levied upon property was recognized as an immediate cause of the financial difficulties now faced by all branches of local government, including school systems. In dealing with this pressing problem, a careful appraisal of the causes of tax delinquency is essential. The desirable procedure will differ according to whether the failure to collect property taxes is due to the fact that those upon whom they are levied are unable to pay or is the result of ineffective tax administration or antiquated tax machinery.

While certain local efforts may be of material assistance, a more formally organized mechanism for absorbing tax delinquencies should be created in many states. In large measure the debts of delinquent taxpayers to their communities will be liquidated in due course. Therefore they now constitute a sound basis for credit operations on the part of the state. In other words, state governments should, where it is constitutionally and financially possible, borrow the necessary funds for current governmental operation, including the maintenance of the schools, against the security of delinquent taxes. In some states such borrowing is feasible from commercial sources; in others, recourse to federal funds would doubtless be necessary. Borrowing during a period of depression

to damp the fluctuations of governmental expenditures is a legitimate and proper process of public financing.

It is undesirable that the expenditures of governmental units should fluctuate through the same range as the cyclical fluctuations of business conditions. It is undesirable, first, because such fluctuation disturbs the essential continuity of governmental and educational programs. It is undesirable, in the second place, because a decrease in public expenditures proportionate to the decrease in private expenditures during a depression has a cumulative effect in increasing unemployment. Dollars spent by the government in building up purchasing power and creating jobs are just as effectual as dollars spent by private individuals. It is of course a corollary of this principle that public expenditures should not be permitted to expand during prosperous times as rapidly as would be justifiable had no borrowing been undertaken during depression. On the contrary, the rapid repayment of these governmental debts should be a first charge on the increased tax proceeds accruing from the upswing in business.

In states where tax delinquency has created an emergency in school finance and where borrowing by the state against the security of delinquent taxes is constitutionally impossible, an emergency situation should be met by an increase in state aid. State legislatures should be brought to recognize their responsibility in connection with relief by direct emergency appropriations to individual school districts in which continued operation has been rendered impossible by failing local revenues.

#### *Other Causes of Financial Difficulties*

The conference recognized that while failure to make full collection of local property tax levies is the major cause of the present crisis in local finance, the schools have in some states been further handicapped by the failure, or partial failure, of state aid funds. In a number of commonwealths appropriations to the schools have been in part withheld because of shrinkage of state revenues. In some states appropriations have been drastically reduced. In still others revenues earmarked for school uses have declined sharply. Difficulties of these types—which can be guarded against by establishing better mechanisms of appropriation for state school funds—have been peculiarly serious when added to the problem of local delinquencies.

The conference emphasized the point that the financial problems of American school systems are much deeper than the difficulties of the immediate emergency. There will be a problem in school finance as long as the present degree of dependence

upon the taxation of real property continues. Dependence upon an overburdened tax means financial instability.

The improvement of the tax system and the relief of the property taxpayer will require the development of new sources of tax revenues. Such development should probably take the form of additional state taxation because of the greater flexibility in the state revenue system. It was particularly recommended that the added state support essential to local property tax relief be utilized in a manner looking toward the financing of a state foundation program of education in every community on an equivalent local tax rate.

#### *Education Should Be Considered a Fixed Charge*

The conference gave attention to certain questions of mechanism that have an important bearing upon the stabilization of school revenue. Without claiming a sheltered financial position for education, the report recommends that, because of the demands of sound budgetary procedure and because of the importance of continuity in educational policy, every effort should be made to bring about a reasonable continuity and stabilization of school support. The practice of making state school support a deferred item in allocating state revenues for other governmental purposes was unqualifiedly condemned.

In further developing this aspect of the present situation the conference pointed out that there is a certain core of governmental activities that must be continued, irrespective of current economic conditions, if organized government and civilization are to endure. The lives and properties of our citizens must continue to be safeguarded, their health must be protected and relief must be provided in emergency periods. The education of children is as essential a part of this core of governmental functions as any of the foregoing. It follows that the operating costs of school systems in performing at least the bare essentials of their services may properly be regarded as a fixed charge upon the community.

It was recommended that a reasonable degree of stabilization of educational finance may be secured through such devices as the continuing appropriation, accompanied by a system of proper budgetary and fiscal procedure, the use of earmarked revenues where this device appears to be the only expedient procedure and the development of an adequate and established system of borrowing against tax delinquencies.

The conference gave especial attention to the rôle of the state in encouraging constructive economy. It was urged that the current crisis offers state departments of education unique opportunity



to exercise helpful leadership in assisting local school systems to achieve increased efficiency and economy in the management of their financial and business affairs. The improvement of budgeting and accounting procedure, the development of businesslike practices and definitive specifications in connection with the purchase of school supplies and equipment, the examination of the cost and returns under various policies for insuring school buildings, provision for the training and certification of janitors, custodians, engineers and other workers responsible for the operation and maintenance of physical school plants, the development of school building divisions competent to offer local districts technical assistance in schoolhouse construction and maintenance and the setting up of provisions designed to safeguard school monies, are among the areas in which it was recommended that the state department of education might exercise increased leadership in achieving constructive economies. It was pointed out that a state department of education in exercising this leadership need not dominate educational policies.

#### *The Role of the Federal Government*

Although the report as a whole emphasizes the rôle of the state in meeting educational problems of the emergency, it clearly recognizes the fundamental rôle of the local school unit in the administration and financing of education in the United States. Particular attention is paid to certain factors that have begun to operate in a few states and that may ultimately cause the breakdown of the time-honored American policy of local participation in the conduct of the public schools. It is the state's imperative duty to assure free opportunity for local initiative to function effectively in the conduct of schools. This principle is of particular pertinence when the financing of education is concerned. Every effort should be made to prevent the enactment of measures that restrict the right of the local community to provide financial support for education beyond that guaranteed by the state foundation program.

In many states reorganization of local school units must be effected before local initiative can really function and economical administration becomes possible. An important section of the report, therefore, deals with this problem. The relation of the emergency in educational finance to the existing types of local school government is dealt with. Criteria for a satisfactory unit of local school government are presented.

The conference gave extended consideration to the rôle of the federal government in financing public education. The report points out that the depression has created a situation in which tens

of thousands of boys and girls and young men and women are having their opportunity for education denied or greatly decreased. The abolition of child labor, as provided in the industrial codes now being adopted, will greatly increase the load of the schools. The present school year promises to be worse than the last, even assuming the continuance of the trend towards economic recovery.

These conditions constitute an educational crisis with which the federal government alone can cope. It alone has the tax-collecting power and the credit to meet this emergency. It can collect taxes, it can borrow money, it can make grants or loans to the states. It should make emergency funds available in order that closed schools may be opened and other schools be prevented from closing.

The conference also recognized the need for a continuing plan for the federal financing of public education. Federal aid to the schools is no new policy. It has been granted in various forms throughout the period of the nation's development. The need for national aid to the states for the support of education, apparent from the beginning, has been increased by conditions growing out of the industrial revolution and the development of the machine and power age. Children suffer the denial of educational opportunity because of inequalities in the ability of the states to support public education. The federal government should aid the states in establishing a foundation program of education for all children. Such action is essential to the preservation and development of our society and to the fulfillment of social equity.

### Private Schools—Number of Teachers, Length of Term and Size

The U. S. Office of Education reports that approximately 60,000 teachers were teaching in private elementary schools in 1930-31. The number of pupils per teacher in all of the private schools averaged thirty-nine. The Roman Catholic schools averaged a few more than this number, the other schools averaged considerably below thirteen pupils per teacher.

Private elementary schools are generally smaller than are public schools in cities of 10,000 population and more, which enroll an average of 416 pupils. Private elementary schools affiliated with the Roman Catholic Church, as reported in the study, enroll an average of 291 pupils, while the other schools reporting enroll an average of only 84 pupils per school.

These private elementary schools have a school year which approximates that of the average public school. In 1929-30, thirty-four states and the District of Columbia reported an average school year in their public elementary schools of 171.8 days. In the same year 775 school systems in cities of 10,000 and more reported an average school year of 186 days. The median school year in private schools falls between these two group averages.





## How the Rural School Can Promote Health in the Community

By W. W. BAUER, M.D., Director, Bureau of Health and Public Instruction,  
American Medical Association, Chicago

**T**HREE vital factors affect the health of the rural school child—environment, communicable disease control and health promotion. In the September issue of *The NATION'S SCHOOLS* I pointed out that environment is fundamental because it forms the background for such health improvement projects as control of communicable diseases, discussed in the October issue, and the promotion of health from the positive standpoint.

This article deals with the third of the three necessary elements of a school health program, and concerns itself particularly with the problems of the teacher in the remote one-room or two-room country school. The rural teacher is charged with the responsibility of teaching her pupils something about their health and that of the community. Assistance is often inaccessible and her need may

perhaps not be clearly defined in the teacher's mind.

As in the problem of communicable disease control, rural areas have certain advantages over urban areas in attacking the promotion of health. They also have disadvantages from which the cities do not suffer. In cities we find compact organization. Probably a department of hygiene exists with teachers or at least a group of supervisors trained in selecting subject matter and planning projects for health teaching. There are also, in all probability, a school physician and a staff of school nurses. Libraries for reference and lending provide access for the teacher to journals and other source materials. Large urban school systems are more likely to provide magazines, books, slides, posters and other helps than are rural schools.

The country school has advantages to offset its handicaps. It is the center of the community and therefore it enlists the interest of parents to a greater extent than does the city school. Contact between school and home is likely to be close, especially in the smaller rural groups. The rural community, in spite of scattered population, is, in all but the most exceptional cases, more compact and homogeneous from the standpoint of group consciousness than is the city neighborhood. Therefore it becomes correspondingly easier to mobilize in support of a project whether it be health improvement or some other civic objective. Lack of intensive competition from other interests, such as the theater, sports or other commercialized amusement, facilitates the furtherance of community projects.

#### *Health Promotion Job Is Twofold*

Best of all, the rural dweller has the habit of cooperation to a greater extent than has his city cousin. The group that operates a threshing combine in partnership or lends help in the erection of a neighbor's barn should not be difficult to enlist in a common cause for health.

The rural school teacher need not despair although she may as well realize that in essaying to teach health she has tackled a real job. She has assets that, with a little ingenuity, can be made to exceed the liabilities. Her job is to teach health and probably in the more sparsely settled areas she will have to substitute as best she can for the school doctor and the school nurse. This job of health promotion is twofold—the teaching of health principles and their translation into positive practices. The real measure, of course, of the effectiveness of health education is performance, not mere knowledge.

The teacher does not need to be told how to teach. Her training has taken care of that. However, her education has not always provided her with material for teaching health, although teachers' colleges are meeting this need with increasing effectiveness. She has everything she needs for the attack except the ammunition. Possibly she does not even have a textbook prescribed and must choose one on the basis of her own judgment. Besides the textbook, she needs practical teaching helps such as posters, work projects, play projects, correlation of the health subject with other topics such as reading, geography and mathematics. Perhaps, too, she wants help in developing her capacity for leadership in community health movements involving the school.

Where shall the teacher look for advice and help? To the hard pressed county superintendent, whose special training for health teaching may be

little, if any, superior to hers, or to the state department of education? The sources of health information are legion and not all of them are desirable. The teacher must develop caution; she must demand to be shown before she accepts. Before she teaches anything she must ask the pertinent question, Who says so?

It is no exaggeration to say that there is no end of health teaching, much of it of doubtful value. No matter what may be its motive or its quality, it hides under the cloak of health education. Commercial interests have seized upon this field as a leading motive for public appeal. They do not fail to recognize the importance of the schools as a medium of dissemination if they can make an entry there. It behooves the teacher to be cautious and to make every self-styled health educator prove his claim to recognition. How is she going to do this?

To begin with, she must know that there are five principal sources of material. The first is the medical profession and allied scientific groups. We shall call them, for the sake of convenience, the scientific sources. They include the health magazine published by the American Medical Association, publications of state or county medical societies and journals published by other scientific groups in the fields of medicine and the allied sciences. The publications of the National Education Association and state associations are included, as are other reputable education journals.

Teachers will probably not refer to medical and other specialized journals direct, but they can call on the nearest medical group, which will probably be the county society, for advice. This brings the knowledge of the organized medical profession close to the remotest country school. If the local medical group desires assistance the medical profession is organized to give it to them. The scientific sources include also the medical schools.

#### *A Second Source of Help to the Teacher*

Advice from such sources about hygiene, sanitation, health promotion, diet and disease prevention may be used by the teacher with perfect assurance that it is given with a disinterested motive and that its authenticity is carefully safeguarded and subject only to inevitable human fallibility. The nearest physician, if he is a member of his county medical society, can command these medical resources for the teacher in the rural school.

Of special interest to teachers should be the joint committee on health problems in education of the National Education Association and the American Medical Association. This committee has been and is studying health problems in schools and the results of its deliberations are printed in a series

of pamphlets available from either of the associations participating in the work. The committee has now been functioning for more than twenty years.

A second source of help to the teacher is a group that may be called the official health agencies. These are the departments of government, national and state. It might be supposed that there would be one national department or bureau dealing with matters of health as they affect the nation. In-

from the surgeon general, U. S. Public Health Service, and the various leaflets can then be purchased, as may all government publications, from the Superintendent of Documents. Prices are nominal.

Other government bureaus of interest to persons teaching health and desiring source material are the bureau of animal industry in the U. S. Department of Agriculture which has to do with federal inspection of meat and the accrediting of tubercu-



*The sand table project is an effective method of teaching pupils the value of pure milk.*

stead there are many. Only those to which the teacher might have occasion to refer will be named here.

First is the United States Public Health Service, a division of the Treasury Department. This is concerned with matters of international and interstate quarantine, promotion of rural health, research, gathering of morbidity statistics and other functions. It conducts the United States Institute of Health, a laboratory through which the licensing of serum and vaccine manufacturers is done and in which much important research is constantly carried on. The Public Health Service publishes weekly the Public Health Reports and also reprints from them. Price lists may be obtained

lin testing of cattle; the bureau of the census in the Department of Commerce which keeps the vital statistics upon which progress of the nation's health can be estimated in a general way; the bureau of mines in the Department of the Interior which makes studies of safety and of industrial hazards, and the children's bureau in the Department of Labor which interests itself in the social welfare of children, including their health. There is also, of course, the Office of Education, Department of the Interior.

The state board of health may also be helpful and it should be contacted when the rural teacher is in doubt. These official agencies, like the scientific group, may be relied upon usually for authen-



tic information though it must be remembered that public officials are sometimes restricted by political considerations. For example, certain health officials are virtually muzzled with regard to advice relating to certain foodstuffs. The manufacturing group brought pressure to bear and the health advice had to be modified or reference to the subject omitted. Scientific groups are not thus trammelled.

#### *Plenty of Commercial Material Available*

A third source is the group of so-called voluntary agencies devoted to health promotion. These agencies are so numerous that it might almost be said that one exists for every health interest. For the convenience of the rural teacher who can scarcely be expected to remember the names and addresses of all of them it will be sufficient to mention the most important. They are the American Public Health Association, the National Tuberculosis Association, the American Child Health Association, the American Society for the Control of Cancer, the National Society for the Prevention of Blindness, the American Social Hygiene Association, the National Committee for Mental Hygiene, all in New York, and the American Federation of Organizations for the Hard of Hearing, Washington, D. C. Inquiries addressed to these groups will, if necessary, be referred elsewhere.

These organizations are called voluntary since they are supported from private sources, from memberships or from public contributions. Many tend to specialize as their names indicate and they are likely to be of assistance in the solution of special problems. The teacher with a general health program to promote must not, however, be unduly influenced by their special emphasis since each of them centers its efforts in a restricted field. They may be depended upon for correct information since they have strong advisory staffs of high scientific qualifications. In general, their influence tends to the socialization of public health and the increase of government or group responsibility at the expense of the individual.

The teacher will find plenty of commercial material at her command as she looks about for ammunition. Here she must be careful. To condemn health educational material because it comes from commercial sources would be narrow-minded; to turn away from it because its distribution may be of commercial benefit to its sponsors would be foolish. Nor does the teacher need to be particularly concerned with the purpose of its publication if it is quite frankly a wish to further the interests of the product or service which it promotes and which pays for it.

The question is whether or not the information

offered is authentic, presented without sensationalism and is in itself free from direct advertising of an individual product. We cannot, for example, teach about health without advising the use of milk. Shall we be silent about milk because its increased consumption would be good for the dairy industry? Shall we hush our teaching about cleanliness because it will help the soap industry, or about lighting because it may increase the sale of electric lights and current, or proper posture because the furniture industry might benefit from the purchase of new seating equipment, or pure water because makers of pipe and fittings will gain, or all health teaching because long lives make insurance profitable? Obviously such an attitude would be silly and out of keeping with American spirit which quite properly sees nothing reprehensible in honest commercial initiative.

Unsound propaganda masquerading under the name of health education is another matter. The material must be judged on its own merits, taking its source into consideration. Guidance from the professional group, named first, will be especially useful when evaluating health material from commercial sources.

Last but not least, we must give thought to quacks and faddists. They are more than willing to offer their material to any who will use it. We shall not discuss any of the particular fads and fakes; only the general characteristics of those who propound them will be considered. As a rule they organize into societies, leagues or associations, often with names deceptively and designedly similar to those of legitimate scientific or voluntary health organizations or government departments. They are always against something. Rarely do they have a constructive idea. When they do make a positive offer it usually identifies itself by the extravagant claims made for it.

#### *All Teaching Material Should Be Analyzed*

The assertions of faddists are seldom supported by specific references to definite experimental proof, or if such pretended references are made, they are easy to trace and to prove groundless. Faddists and quacks are inclined to be boastful and to emphasize personalities rather than principles. They cannot endure questioning and usually burst into tirades of abuse of any who dare challenge them. They employ testimonials from unqualified persons who may indeed be socially, politically or otherwise prominent. Most of the material promulgated by cranks, quacks and faddists bears the mark of its parentage on its face, but this is not always true. To be safe, the rural teacher ought to check up on every piece of health teaching material she proposes to use.

The rural teacher must reach out for aid in organizing her health teaching. She knows how to teach; others know what ought to be taught; still others have material they would like to have taught. The teacher must gather, winnow and organize. It is a big job, but, like most big jobs, it is well worth doing and doing well. If it is done well the knowledge will probably be translated, in part at least, into performance, the ultimate goal.

As a natural outgrowth of health teaching, the actual promotion of the health of children follows as a logical corollary. Obviously it does John no good to know that bad tonsils may give him rheumatism and injure his heart if he continues to have a bad pair of tonsils. Here is a real problem. The well trained teacher quite properly feels that she has no business attempting to diagnose physical defects among her pupils. At the same time, she recognizes the opportunity, or perhaps even the obligation, to translate her teaching into action.

Without departing from the principle that lay persons cannot diagnose disease, we must admit that the average intelligent adult can tell when a school child is not in normal health. If the teacher can get a scale into her school, she can quite properly ascertain the weights and measures of her pupils. She certainly can suspect the presence of defective eyesight or hearing and poor school work is surely evident to her. A child with constant colds and a tendency to breathe through the mouth needs no doctor to recognize that something is wrong. Repeated absences, as a rule, are signs of impaired health.

#### *Teacher Must Adjust Herself to Conditions*

These obvious evidences can be recognized by the teacher and should not be overlooked. She must then utilize the resources of the community for their correction. If there is a county nurse, so much the better. Even so, county nurses can rarely give much time to any one school. It will probably be up to the teacher to do what is the usual duty of the county nurse, namely, to sell the parents on the idea of having a doctor examine the child and then proceed to necessary corrections, whether physical, hygienic or both.

Teachers familiar with city systems of school medical inspection and examination need not be appalled at the lack of such facilities in rural areas. Many city systems are more impressive than effective. They cover too much ground with less thoroughness than real scientific health promotion requires. The teacher in the country school is much like the doctor in the country town. She may have come from a fine teachers' college and she may be accustomed to the best of equipment and aids in her work, just as the doctor may have come from

a hospital with equipment that is the last word in modern progress. Both must adjust themselves to the tools at hand.

That the country doctor has been able to do a good job is evidenced by the belated sorrow now in evidence at the threat of his passing from the rural scene. The rural teacher too can do a good job with the help of that same country doctor who will give her sympathetic advice and help.

She cannot have at her command the big and impressive human machinery that functions in the metropolitan center nor can she show statistics of thousands of pupils examined and defects corrected. But in her limited field she can make a practical and important contribution to the health and the health education of the children in her country district.

## Annual and Semiannual Promotion

By J. ARMOUR LINDSAY

Supervising Principal, North Arlington, N. J.

In analyzing problems dealing with the broad aspects of the American public school it is imperative that techniques be developed by means of which the many disparate factors impinging on the problems may be assembled and evaluated. Such a device was used in examining the merits of the two most popular promotional plans in use in the United States at the present time.<sup>1</sup>

All arguments and data relating to the value of either annual or semiannual promotions were arrayed with respect to their importance as they affected the educational program. The majority of the arguments advanced in support of both annual and semiannual promotion were eliminated as being contrary to fact or reciprocally annulling each other.

The residual arguments, however, pointed to the fact that in terms of a traditional type of school in which advancement was dependent for the most part on proficiency in the knowledge of subject matter as shown by an examination, and the use of retardation and acceleration as adjustment devices was sanctioned, the semiannual promotional plan appeared to have a slight advantage. When viewed from the perspective of the transitional type of elementary school, which attempted more adequately to adjust the offerings of the school to the varying needs of the pupil personnel and also to provide additional approaches in presenting the learning material, the superiority rested with the annual type of promotion.

A general conclusion was drawn from the study that neither method of promotion can be entirely successful in meeting the dynamic needs of the modern elementary school program. Probably the solution to the promotional dilemma will be found in a flexible exchange of pupils for growth in the major subject fields and social enterprises within a general school division. Undoubtedly four of these divisions—primary, intermediate, junior and senior high school—would provide the latitude within the school unit which the efficient adjustment of the offerings of the school to individual needs demands.

<sup>1</sup>Lindsay, J. Armour, Annual and Semiannual Promotion; With Special Reference to the Elementary School, Teachers College, Columbia University, 1933.

# How Functional Philosophy Applies to Elementary Education

*Discussion opened last month by Dr. John K. Norton is continued and the professional functions of those responsible for elementary education are outlined*

By GEORGE C. KYTE, Professor of Education, University of California

WITH the interests of children particularly in mind, we may analyze in greater detail the aspect of elementary education in a functional philosophy of school administration.

Over a system of elementary schools as educational leader and professional specialist stands the superintendent of schools. Although this idea sounds trite to us, this conception of the primary function of the superintendent is still not grasped by large numbers of laymen and is ignored by many others. In order to eradicate the injuries done to children because of the unfortunate situations thus created, it is necessary to enlighten the one group of laymen and to nullify the influence of the unjust smaller group. There must be general acceptance of the superintendent as the responsible administrative and supervisory head of the school system in which he is employed.

## *Principal Has No Time to Teach*

In his capacity as executive head, the superintendent of schools must delegate clear-cut responsibilities to his assistants in terms of clearly defined functions. This principle has been treated so thoroughly by Dr. John K. Norton in the October issue of *The NATION'S SCHOOLS* that its application may be made to the organization of elementary education without further expansion. We may turn our attention, therefore, to the professional functions of the principal, the teacher and other experts essential to serving the recognized educational needs of elementary school children.

The principal of an elementary school, as its executive head, is directly responsible to his professional superior officer—the superintendent of schools—for the educational results achieved in the school. The principal is responsible, therefore, for the improvement of child development in that school. Hence his most important work is the improvement of teaching in every classroom in the

building. His primary function is supervision. His major contribution to the efficient growth of the children enrolled in his school results when he devotes most of his time, thought and energy to the supervisory activities that aid teachers in continuing to increase their professional efficiency.

Some educators are losing sight of the principal's major duties and many communities are preventing principals from being effective workers, especially by assigning them to classroom teaching. Under such circumstances elementary school principals cannot visit teachers and pupils at work in classrooms in order to diagnose and analyze teaching and learning conditions, plan for facilitating the growth of children, put the plans into operation through organization, administration and supervision and appraise the results attained. The principal who works effectively in organizing, administering and supervising his school and its personnel and in carrying on the related activities has about as much time to assume the rôle of a classroom teacher as a train dispatcher has to serve as engineer on a train in addition to doing his special work.

## *The Principal's Responsibilities*

As a supervisory officer freed from teaching, then, the principal devotes himself primarily to activities adapted to the improvement of teachers. A large amount of his working time and most of his professional energy should be used in planning his supervisory program and activities, observing in classrooms, conducting individual supervisory conferences, holding professional teachers' meetings, preparing supervisory bulletins and appraising all phases of results attained. In these activities as supervisor, he should utilize planned demonstration lessons, professional intervisitation of teachers, constructive installation of courses of study, scientific administration of testing and measuring and forward looking means of careful research.



As an organizer and administrator, the principal gives time and thought to the sound organization of his school and its staff, his administration of the school and its educational program, his careful leadership of the personnel, the constructive maintenance of public relations and the scientific evaluation of his own work and that of all other members of his school. In all of these activities and such others of less importance as he is called upon to carry on, his major consideration rests upon the improvement of instruction and the increased efficiency of learning.

From this conception of the responsibilities and duties of the elementary school principal, it is not difficult to define the professional function of the teacher. She is the executive of the instructional program in her classroom. She is directly responsible to the principal, consequently, for the results achieved in her room. The only other officer in the system to whom she is directly accountable for the results attained, and then only through the principal, is the superintendent of schools. All activities that she is called upon to do other than those classifiable as phases of teaching are, therefore, of secondary importance. Sometimes this educational axiom is forgotten when irrelevant demands are made upon her that consume her valuable time and energy.

#### *Teacher Must Be Ever Alert to Pupils' Needs*

As the mainspring of the instructional machinery at work in the classroom, she engages in all of those activities that contribute directly to her skillful execution of the teaching act. She must acquire and maintain a thorough understanding of all pertinent parts of the adopted course of study. With intelligent insight and marked efficiency she must use it as a guide in her work, keeping ever alert, however, to sound modifications to be made in her teaching in agreement with recognized fundamental needs of every child in her classroom. This great responsibility requires her to plan her teaching thoroughly, to utilize progressive methods proficiently, to guide each pupil perspicaciously and to appraise results scientifically.

Some administrative workers are making, or permitting to be made, false economies resulting in actual harm to children. It is true that some of the policies maintained have been demanded by uninformed or disinterested laymen, but if professional leaders are to do more than pay lip service to professional ethics, they will stand squarely for the rights of the children who cannot speak for themselves.

Before discussing the most important person in the elementary school, the child, it is necessary to

present briefly other persons who have responsibilities in the program of elementary education. One group consists of all supervisory officers other than the superintendent and the principal. They are the various experts in specialized fields of service. They serve as technical advisers to the superintendent and to the principal. They are employed, therefore, to aid these two officers in training teachers to become reasonably proficient in the various specialized phases presented by the individual experts.

#### *Supervisors Should Not Rate Teachers*

This brief delineation of their paramount educational function implies a reciprocal responsibility on the part of the elementary principal which needs to be stressed with some principals from time to time. The principal is professionally obligated to make constructive use of the services of the specialists so that the child derives the benefits that should accrue from their work.

If the special supervisory officers are to succeed as advisory helpers of teachers, they must not be given administrative responsibilities that will interfere with their efficiency in this respect. If this reasoning is sound, then superintendents should refrain from delegating to special supervisors, for example, the responsibility of rating teachers for administrative purposes. The activity inevitably interferes with the establishment of the highest type of rapport so necessary for both teachers and supervisors to maintain in order that the latter may be unhampered in their efforts to help the teachers grow.

Besides the group of special supervisors there is the group of auxiliary agents appointed to engage in various activities that facilitate the work of all other officers and of the teachers. They are essential members of the school system who have been employed primarily, therefore, to contribute to the improvement of teaching and consequently to the increased effectiveness of learning.

#### *Children's Interests Come First*

The janitor, for instance, should understand and appreciate that the care of the elementary school building has been entrusted to him and that his job is to keep it in the best condition possible in order to serve the child as an efficacious means of growth. The person directly responsible for the purchase of instructional supplies must buy paper not with the sole thought of getting cheap materials but rather with the intention of getting at the lowest possible cost paper satisfactory for the educational use for which it is needed. The latter procedure in purchasing instructional materials is the only truly efficient and economical one.

From the same standpoint of educational significance, the architect of a school building must keep uppermost in his planning the important educational uses to which the building must be put. Every other point is of secondary importance. With respect to all other persons serving in auxiliary capacities, the same generalization applies—every activity should be influenced primarily by the aim to promote the growth and the development of the child.

#### *John Dewey's Definition of "Guidance"*

What of the child, the learner for whom the elementary schools have been created? We may describe him as the executive of his learning program in his educational environment. He is directly responsible to the teacher, however, as the agent of society appointed to guide him in learning most efficiently.

Many years ago John Dewey wrote a definition of guidance that gives it the wholesome place it deserves in teaching. "Guidance," he stated, "is freeing the life process for its own most adequate fulfillment." "There are those," he continued, "who see no alternative between forcing the child from without or leaving him entirely alone. Seeing no alternative, some choose one mode, some another. Both fall into the same fundamental error. Both fail to see that development is a definite process which can be fulfilled only when adequate and normal conditions are provided."<sup>1</sup>

If we pause to visualize the teacher working efficiently in the classroom in keeping with Dewey's statement, we can appreciate more keenly certain phases of the administration and supervision of elementary education that are too frequently neglected by school officers. In planning and conducting her work in the classroom, she determines and maintains sound educational purposes. With these objectives in mind, she meets or creates in the child an actual need and purpose for undertaking educative activities.

His method of attack is guided by her so that he profits in large measure from the experiences the activities provide. She helps him connect and convert past experiences into the development of new subject matter. She also assists him to collect and organize new materials into working form. As the child engages in the activities that provide purposeful learning, the teacher inspires and guides him to proceed through normal activities, utilizing in them the integrated materials. Finally she guides him in testing and using the product of his efforts and thus his normal growth occurs.<sup>2</sup>

This complex process occurs with certain specific teaching skills in evidence. A few examples will suffice to illustrate their nature. The environment in which the child obtains the experiences is carefully planned so that it is as natural and effective as possible. The methods used result in economic and efficient learning activities. Expert attention is given to the needs of individuals. Efficient routine is employed when and where it is needed to facilitate proficiency in learning.

From the brief description of the teaching and learning activities, the personal, professional and social attributes of the teacher can be inferred. The nature of the teacher's influence on children and of her guidance on their growth is also easily deduced.

As the teacher strives to give each child opportunity to attain outcomes in keeping with the general objective of education, the administrator should concern himself with striving to assist her in achieving the analogous professional goals. How the administrator and supervisor should operate with attention to the personal as well as professional relationships involved concludes the general picture of the functional philosophy of administration as applied in elementary education.

The administration of elementary education should be characterized by a definite, well organized plan of professional activities. Scientific knowledge, skill and attitude must govern administrative and supervisory procedure. Educational leadership, cloaked with both authority and responsibility, should be vested in those persons who have earned the respect of the teacher by their own professional success.

#### *Morale and Esprit de Corps Are Essential*

Since the elementary school is largely an organization of human beings, morale and esprit de corps are essential to its successful operation. Administration as well as supervision must be conducted democratically and cooperatively. Teamwork, in which all members of the school participate actively, freely and willingly, should be sought, and once it is achieved it should be maintained.

Inspiration, encouragement and assistance must be assured to each teacher as well as to each child. The degree to which they are evident is due in a large measure to the work of a professional administrator who exhibits genuinely personal qualities such as sympathetic understanding, kindly manner, openmindedness and educational vision. They constitute the human factors that contribute vitally to producing an administrator whose leadership conforms with the centuries old standard given to us by Mazzini—"the wisest and best."

<sup>1</sup>Dewey, John, *The Child and the Curriculum*, pp. 22-23, University of Chicago Press.

<sup>2</sup>Kyte, George C., *Manual of Directions for the Howe-Kyte Diagnostic Record of Teaching*, pp. 8-9, Houghton Mifflin Co.



# Indiana Protects Its Schools

*Intelligent executive leadership enabled the 1933 Indiana legislature to withstand all efforts to weaken the schools. Six new laws were passed that change materially the organization of public education*

By HENRY LESTER SMITH, Dean, School of Education, Indiana University

**I**N THREE respects the 1933 general assembly of Indiana passed legislation materially affecting educational theory practices in the state.

In the first place, the large state board of education was replaced by a smaller board more appointive and less ex officio in character. Secondly, the minimum teacher salary law of \$800 for elementary teachers and \$1,000 for high school teachers withstood a determined attack, and the teacher tenure law held its own in city and town school corporations but was defeated in township schools. In the third place, four important laws were passed concerning the financing of public education. These laws provide for (1) revision of the basis for distributing the state common school fund; (2) revision of the state aid law; (3) revision of the composition of the county board of tax adjustment, and (4) optional payment by the state of a portion of the salaries of local school teachers.

Several other less important laws were passed. These provide for (1) a uniform salary law for county superintendents, based on the population of the counties served; (2) standard regulations for the construction of school busses; (3) compulsory transportation for high school pupils where a petition of 60 per cent of the resident taxpayers of the school unit is presented; (4) compulsory transportation of parochial school pupils along routes of travel to public schools, and (5) greater flexibility in the transfer of school monies from one fund to another.

## *Administrative Agency Reorganized*

The change in the composition of the state board of education was brought about through a sweeping reorganization of the entire state executive and administrative agencies. Previously the state board of education consisted of "the superintendent of public instruction, the presidents of Purdue University, the State University, and the State Normal School, superintendents of schools of the three cities having the largest enumeration of children for school purposes annually reported to the state superintendent of public instruction, as pro-

vided by law, three citizens actively engaged in educational work in the state, at least one of whom shall be a county superintendent of schools, and three persons actively interested in, and of known sympathy with, vocational education, one of whom shall be a representative of employees and one of employers." The governor appointed the six citizen members of the board for a term of four years.

The new act provides that "the department of education shall be in charge of the board of the department of education, which shall consist of the state superintendent of public instruction, who shall be the chief administrative officer thereof, the governor, the lieutenant governor and six additional persons, four of whom are actively engaged in educational work." The governor appoints the six citizen members. The length of their terms is determined by the desire of the governor, but in no case may they serve more than four years without reappointment.

## *Minimum Teacher Law Upheld*

In spite of a determined effort on the part of a considerable group of legislators to discard the Indiana minimum teacher salary law, the general assembly placed on the statute books a law setting the minimum salary for elementary teachers at \$800 and for high school teachers at \$1,000.

Two important changes were made in the teacher tenure law. The earlier law, enacted in 1927, provided that "any person who has served or who shall serve under contract as a teacher in any school corporation in the State of Indiana for five or more successive years, and who shall hereafter enter into a teacher's contract for further service with such corporation shall thereupon become a permanent teacher of such school corporation."

The amendment changed the phrase "any school corporation" to "any school city corporation or in any school town corporation," thus eliminating from the provisions of the law the teachers of all township school corporations of the state. A further provision of the amendment states that such



teachers shall remain as permanent teachers until they "shall have reached the age of sixty-six years."

For many years the revenue derived from the common school fund of Indiana has been distributed to the counties by the state superintendent of public instruction on the basis of the enumeration of children between the ages of six and twenty-one. The 1933 general assembly amended the 1893 act to provide for distribution of common school revenue on the basis of the "average daily attendance of children in grades one to twelve in the schools of such county."

#### *Changes Made in Tax Laws*

A change was also made in the disposition of the receipts from the state property levy of seven cents and the state poll tax levy of fifty cents. According to the act of 1931, these receipts were divided in such a way that 55 per cent was applied to the common school fund of the state while 45 per cent was diverted to the state aid fund. The entire receipts, according to the 1933 act, are to be used as the state common school relief fund and distributed to the school corporations of the state according to rules and regulations promulgated by the board of the department of education.

By an act of the 1932 special session of the Indiana general assembly the maximum total property tax levy for all governmental units in the state was set at \$1.50 on each \$100 of taxable property. A county board of tax adjustment was created "to examine and, if it deems such action necessary, revise, change or reduce, but not increase, any tax levy," except "if an emergency exists as to any municipal corporation, such board, by a vote of at least five members thereof, shall have the power to fix such tax levy for such municipal corporation as is necessary to meet such emergency though the total rate fixed as a result thereof shall exceed the tax rate of \$1.50." This board of tax adjustment was composed of the county auditor, three members of the county council selected by such council, and three members appointed by the judges of the circuit court of each county.

The 1933 general assembly amended the law in two vital respects. The maximum levy of \$1.50 remains in force for territory inside the corporate limits of incorporated cities and towns, but is reduced to \$1 for territory outside of the corporate limits of incorporated cities and towns. These rates may be exceeded if the county tax adjustment board declares an emergency to exist.

The membership of the county tax adjustment board was changed. By the new provisions the board is composed of one member of the county council selected by such council and six members

appointed by the judge of the circuit court of such county. The six appointees must have the following qualifications: "One shall be a duly elected, qualified and acting township trustee of one of the several townships of such county; one shall be a duly elected, qualified and acting mayor of a city in such county or a president of the board of trustees of an incorporated town in such county; one shall be a duly elected or appointed, qualified and acting member of the board of school commissioners, board of school trustees or board of education of a school city or school town in such county, and three shall be resident freeholders of the county at large."

A fourth law, passed by the 1933 general assembly and vitally affecting the financing of education in every school corporation in Indiana, provides that the state shall pay to every employing school corporation in the state an amount not to exceed six hundred dollars for every legally licensed teacher employed in grades one to twelve, inclusive. Under the provisions of this law the number of teachers for the elementary schools is determined on the basis of one teacher for every thirty-five pupils in average daily attendance in each school corporation, and for the high schools, one teacher for each twenty-five pupils in average daily attendance in each school corporation. The payments to the school corporations of the state are to be made semiannually, on January 1 and July 1 of each year.

### Educators Must Learn How to Handle Publicity

One great reason for the attack on the cultural subjects in the school curriculum is that educators have not learned how to explain their methods to the taxpayers in simple, nontechnical language that can be easily understood, that sounds sensible, and that shows plainly why people should spend their money to support the schools and to pay for the teaching of these subjects. This is the opinion of Florence Hale, editor, *Grade Teacher*.

The greatest need during the coming year is for teachers and school superintendents to make definite plans for explaining the curriculum and methods to the everyday citizen in this simple language, in the opinion of Miss Hale. If any of these subjects cannot be explained in this way, it is doubtful if they should be retained in the curriculum.

If the educator can only learn through the press, through public meetings and through personal visits to the home, how to translate his school language into common, everyday, sensible English and to formulate his arguments in words that the ordinary person can understand, half the battle for all the school subjects will be won.

The school and its interests must be brought to parents through evening gatherings and through the newspapers. Educators will do well through the coming critical months to work out a systematic plan for this interpretation of the schools to the public.

# What Price Attendance?

*The normal, healthy child wants to attend school regularly. His ability to do so, however, is jeopardized, as is the school's attendance record, if ill pupils are encouraged to attend school in an effort to boost that record*

By WILLIAM P. UHLER, JR.

State Department of Education, Trenton, N. J.

SCHOOL administrators are often impelled to take action in regard to pupil attendance by the fact that the school apportionment of public monies is based upon the total number of days of attendance. This impelling motive causes the administrator to bring pressure to bear upon the teacher. The teacher, in turn, does the same thing with the pupils and the pupils carry the idea home to their parents.

The pupils are taught that it is a virtue always to be present at school and a serious offense to be absent. The laws of learning are invoked so to indoctrinate the pupils that they become attendance-minded, a program not unmixed with evil. All down the line, from the board of education through the superintendent, the principal, the teacher and the parents, pressure is exerted upon the pupils until they feel that loyalty to class and to school demands their presence even if they must sacrifice personal comfort.

The attendance contest is a result of this system of pressure. Pupil against pupil, class against class, teacher against teacher, school against school, and even county against county are arrayed to see who can establish the highest attendance record. The tendency toward competition in teacher and in pupil is exploited to obtain the desired end. The teacher bears the brunt of the contest. She knows that her rating for successful work depends, at least in part, upon a high attendance record on the part of her pupils, and is led to

urge them to ignore slight indispositions, such as colds, headaches and slightly sore throats, in order to be present at school. Working upon the emotions, particularly loyalty and fear, the teacher creates in the pupils a concept that envisages absence as a disgrace upon the class.

The social pressure thus engendered is a powerful factor in the situation, and it is used by the teacher to accomplish her objective. The other pupils express themselves in no uncertain terms and empty the vials of their wrath upon the luckless individual who was so unfortunate as to fall by the wayside and spoil the record. This pupil shortly comes to feel that the mores of his little world are strongly concerned with the extremely important class record.

No stone is left unturned to bring about this condition. Records are posted on bulletin boards and blackboards, announcements are made in school assemblies, standings are published in the school and local papers, individual pupils with long uninterrupted attendance records are given prizes and lionized in the newspapers. The system goes merrily on; high attendance percentages are recorded and all congratulate themselves upon the good job that has been done.

## *Interests of All the Pupils Must Be Considered*

Occasionally, when conditions are disturbed and administrators and teachers find themselves confronted with a disease epidemic, they wonder how it all came about. The answer may quite likely be that some pupil bearing the organisms of disease concealed his condition and yielded to the urge to be present in school. Although this pupil was in no condition to profit by being in school, nevertheless he attended and in doing so was the innocent cause of illness on the part of other pupils.

I do not mean to minimize the importance of teaching pupils the value of regular school attendance, but rather to protest against the vicious system which, forgetting the best interests of all the pupils, makes the attendance record an end in itself rather than a means. Attendance contests create a tendency to ignore the fact that children should be taught that there is a time when loyalty to the best interests of school and self demands that they remain at home. Furthermore, in the event of such contests teachers are inclined to allow children with slight colds, headaches and sore throats to

remain in school instead of sending them home where they belong.

The attendance contest fails to take into account the responsibility of the school to create in the minds of parents and pupils an attitude of discrimination. Both should be made to understand that it is dangerous, not only to the individual pupil but also to his classmates, for him to be in school if he shows signs of a cold, headache, or sore throat. They should be made to realize that the potentialities are of greater moment than is the more obvious danger. Many communicable diseases in their initial stages show exactly the symptoms mentioned above. The pupil evidencing these signs, even though he has been in class only a few hours, may have infected one or more of his classmates.

Teachers should be instructed to be ever on the lookout for these three symptoms and to act promptly when they appear in order that the suspected pupil may be isolated. Children should be taught to report promptly any such indisposition. Every teacher should create in the mind of the pupil a concept of social responsibility that would include an obligation to protect others from being infected with any disease that he may have contracted. When a suspicious case has been discovered the pupil should be referred to the school physician, or in the physician's absence, the pupil should be sent home until he receives a clean bill of health from a physician.

In instances where parental laxity, indifference or lack of control is the underlying cause of absence the teacher is justified, in fact obligated, to use every social pressure to ensure attendance. This is true also in the case of malingering by indifferent pupils.

#### *Two Examples of Unnecessary Exposure*

Instructing pupils to remain at home when suspicious symptoms appear opens a way for them to pretend illness. Nevertheless, it is better to have this happen than for one pupil to be in school when it is possible he may start an epidemic.

The following examples illustrate the danger of allowing pupils to remain in school after suspicious signs develop: Several pupils were reported to the principal of a school as having suspiciously inflamed eyes. The principal decided the inflammation was due to nothing more than a cold and sent the pupils back to the classroom. As a result, sixty-five cases of conjunctivitis developed within a few days. In another school a pupil was allowed to remain in school with a condition that subsequently was diagnosed as scarlet fever. Three other pupils in the same class soon developed the disease.

It is probable in both of the instances mentioned that spread of the disease would have been pre-

vented had isolation been effected as soon as the condition was discovered.

A better attendance record will result in the long run if the health viewpoint prevails. In the modern school the attendance problem, like all other pupil problems, should be studied from the viewpoint of the individual. Reports from the truant officer and the visiting nurse, especially the latter, will provide data that may be used in the effort to remove the cause leading to absence. The attendance record will improve when the cause of absence is removed.

A properly constructed curriculum and good teaching methods will make the school attractive to the normal child. If he is in good health he will want to be present. His opportunity to be present will be enhanced by excluding from the classroom all pupils with a known or even a suspected illness, including those afflicted with common colds. Justice to the pupils demands that this practice be followed.

### A School for the Whole Family

The full-time adult school of the District of Columbia, known as the Americanization School, is directly under the board of education. An entire school building is used for adult educational work. Classes are open day and night for practically the entire year. There is a short vacation in June and September. Maude E. Aiton, administrative principal, Americanization work, public schools, District of Columbia, describes the activities of the school as follows:

This is a school for the whole family. A nursery and a kindergarten afford an opportunity to bring the youngest members and make it possible to demonstrate to the parents the value of child care, including health and education. Field teachers carry on many classes in the homes and the Rotary Club provides bus transportation for entire home classes, including children, to the central school.

The organization of the school provides, (1) graded classes of men and women seeking naturalization, close contact being maintained with the court and the naturalization bureau; (2) graded classes for adults desiring to study the English language; (3) graded classes for the underprivileged, both native and foreign-born who need primary work; (4) many special classes, such as a budget luncheon class, mothers' sewing groups, a current topics class, a legislative study group, handicraft groups, a garden club, a practical law class and a general science class.

The age range (including the nursery) is from babyhood to men and women of advanced years. The average age varies from the late twenties to the early thirties. The educational range of students is from illiteracy to university men and women. The nationality range includes over fifty nationalities.

The Americanization School Association, an organization initiated by the students of the school, has functioned for more than eleven years. Its work is correlated with the school work and it affords many extracurricular activities, such as a library, an orchestra, a chorus, a bulletin and recreational activities. It also carries on extensive aid and employment work.



# Sound Films vs. Traditional Methods in Science Teaching

*Motion pictures used to supplement general science instruction yield an increase in pupil learning of more than 20 per cent when measured in terms of permanent acquisition*

By PHILLIP J. RULON, Professor of Psychology, Harvard Graduate School of Education

**D**URING the past decade more than one hundred separate experiments have been performed for the purpose of determining whether children taught by means of motion pictures learn more than those taught by traditional methods.

Probably the best way to summarize briefly these many experiments is to say that the motion picture, when properly produced and wisely used, possesses distinct pedagogic values over and above traditional teaching methods on which the same amounts of time and energy are expended. By far the larger part of the experiments reported show that children studying by means of the motion

picture have learned more than their fellow pupils who did not have this aid.

From the standpoint of practical school administration, it is of little value to know the answer to the question, Will the introduction of films into my school increase the amount of learning done by my pupils? Considerations of budget and operating expense make the practical problem take the form, Will the probable increase in learning brought about by the introduction of films into my school be worth the necessary outlay for equipment and operating expense?

Cost of films and film equipment is readily ascertainable and the school administrator can also de-



*The school auditorium is an ideal place to show sound pictures to large groups.*

termine with some accuracy the cost of operating his instructional plant in its accustomed way. But until some numerical index can be worked out showing the amount by which learning may be expected to increase with the introduction of motion pictures into the teaching procedure, the decision concerning such introduction remains largely a matter of guesswork. In an attempt to provide the necessary index and so reduce the amount of guesswork, the Harvard Graduate School of Education and the University Film Foundation recently conducted a study under a grant from the Carnegie Foundation for the Advancement of Teaching.

### *Three Groups of Children Were Tested*

The school subject selected for experiment was general science at the ninth grade level. Choosing representative general science textbooks as patterns, a special textbook of eight chapters was prepared to supply instructional material in physiology and biology for a six-week period. Supplementing each chapter of this textbook, a reel of sound motion pictures was provided for the film instruction program.

Six of the eight reels of sound motion pictures were produced for the experiment by the University Film Foundation at Harvard. The remaining two reels were supplied by the Electrical Research Products Corporation. All eight reels were of the 35 m/m sound-on-film type and were projected in the classrooms with standard size portable equipment to guarantee clarity of projection.

As subjects for the learning experiment, approximately two thousand ninth grade junior high school boys and girls were divided into three groups. One of these groups, containing nearly 1,250 pupils, studied the textbook in the usual manner and so acted as a control group.

The next largest group, of nearly 450 pupils, constituted the experimental film group. They also studied from the textbook but in addition they were shown in connection with each chapter the reel of film which supplemented it.

A third group of children was introduced into the experiment for the purpose of providing a zero point from which instructional effect could be measured. This group of 300 pupils did not study the general science material used in the experiment but instead continued in their accustomed way to study other general science topics chosen so as not to overlap the experimental instructional material. This group was called the zero group since its test score at the end of the experiment represented the result of zero instruction.

The showing of the film naturally reduced the amount of time that the film group could devote to

the text. That sacrifice, however, would have to accompany the systematic introduction of motion pictures into any school. The introduction of films generally into schoolroom instruction cannot take place if it necessitates an increase in the number of hours in the school day. Even if it could take place, a comparison of efficiency must of necessity be made with such factors as time and effort held constant.

The showing of the films occasioned no break in the regularity of the classroom procedures. The films genuinely supplemented the textbook and the two instruments of instruction were employed hand in hand. The degree of mutual supplementation attained by producing the text and films in collaboration cannot be achieved by purchasing or renting currently available films and to this extent the experiment did not typify present film procedures. It was the purpose of the experiment, however, to ascertain the value of what can be done with films rather than of what is now done with them.

The closeness of supplementation between films and text does not imply that the two sources were mutually dependent. On the contrary, the text was entirely self-contained and self-sufficient and made no reference to the films. Nor did the films make any reference to the text.

The films in no way replaced the usual methods of classroom instruction. Teacher and pupil discussion, projects, collateral reading, supervised study and other modern teaching methods were employed with the film group just as they were with the control group. The film group simply used both films and text as study materials.

### *How the Tests Were Planned*

The children of all three groups were measured immediately at the end of the six-week instructional period and again at the end of more than three months during which time the experimental instructional material did not again appear in the study program.

The manner in which these tests were constructed is fairly important in the interpretation of the results of the experiment. All items in the tests were of the new type or objective form and were answerable by reference to the instructional textbook which was used by both the film and the control groups. The film group, therefore, was not measured for the learning of any material that had not been presented to the control group. Since the experiment aimed at measuring instructional effect, the test items employed were tried on uninstructed children before being used in this experiment and all items that many children answered correctly without having had instruction

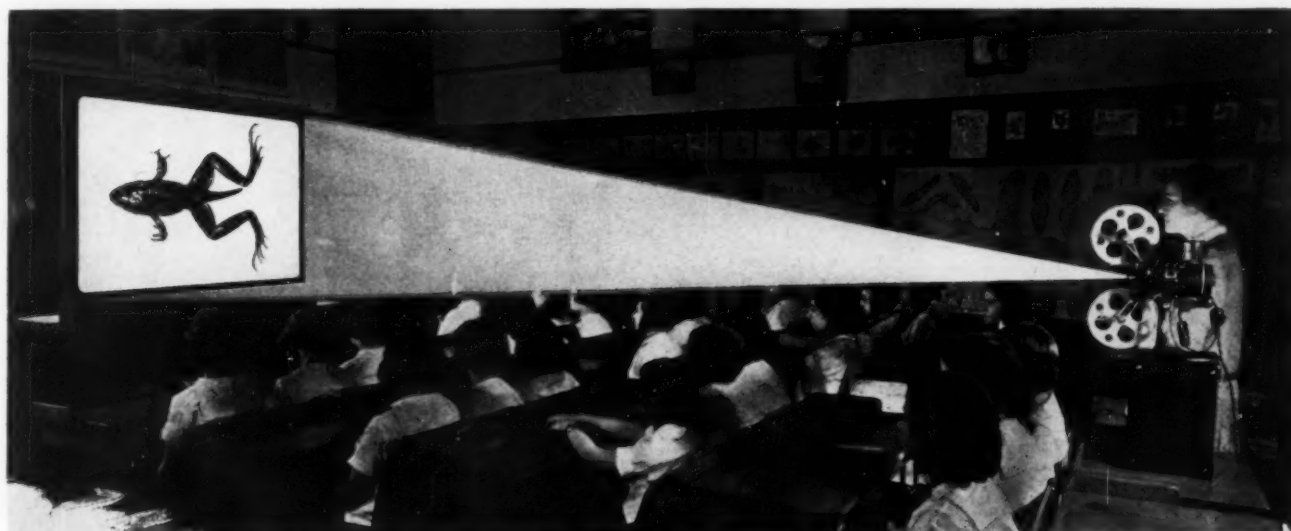
in general science were deleted from the tests.

To measure the amount of learning accomplished by the control group at the end of the six weeks of instruction, the mean test score of the zero group was subtracted from that of the control group, and the difference, ascribable to the instructional effectiveness of the control teaching procedure, was called the control gain. Similarly, subtracting the mean score of the zero group from that of the film group gave the film gain.

A comparison of these gains as computed immediately after the instructional period showed that the film gain exceeded the control gain by 20.5 per cent. This difference in gain was accompanied by a probable error of only 2.6 per cent so that the

week, one period a day. All of these schools had used the same basic textbook in science and approximately the same collateral reading texts were available for the children.

The three groups taking part in the experiment were exactly matched with reference to chronological age, mental test score and science information score at the beginning of the experiment. With respect to the excellence of their teachers, the three groups were as nearly balanced as possible with the use of ratings of excellence. The teachers of one group carried approximately the same teaching load as did the teachers of any other group. The pupils of all three groups studied in classes of approximately the same size, for the same number



*Sound pictures have proved themselves a powerful teaching instrument. Tests show that knowledge thus acquired is retained better by pupils.*

results were sufficiently conclusive to satisfy the most rigorous criteria of a statistical significance.

That the superiority of the film taught children at the end of the instructional period must be ascribed to differential effectiveness in the instructional procedures and not to differences in the children themselves is evidenced by the nicety with which all three groups were balanced at the beginning of the experiment and the equality of the conditions surrounding the teaching during the experimental instruction.

The two instructed groups were balanced with respect to all factors commonly considered responsible for children's achievement. These factors included socio-economic status of community of residence as measured by occupational level of the adult males in the community. Both groups studied in school systems organized on the junior high school basis and both groups were composed of children who were taking general science as a required part of their course of study. In all the cooperating schools general science was taught only in the ninth grade and was offered five days a

of minutes a day, the same number of days a week and at the same time of day. The amount of assigned homework was the same for the two instructed groups. The proportion of boys to girls was similar in all three groups.

In short, the three groups were so nearly equal with respect to probable achievement that it is almost inconceivable that any appreciable amount of the differences exhibited in their attainment at the end of the experimental period can be ascribed either to imbalances between the groups at the outset or to lack of control during the instructional period.

When the tests were administered again at the end of more than three months of "forgetting time," the film group showed even greater superiority over the control group. This time the film gain exceeded the control gain by 38.5 per cent. For this comparison the probable error was only 4.4 per cent so that this large superiority in the film group's retained gain may be even less reasonably ascribed to chance than could its superiority in the earlier testing. In fact, the film



group's superiority in retained gain was so great in comparison to its own probable error that it exceeded 20 per cent by a statistically significant amount.

We may therefore answer the question set up at the outset of the inquiry as follows: When good and generally supplementary sound motion pictures are introduced in connection with modern teaching methods in general science instruction, we may expect the resulting increase in pupil learning to be an amount in excess of 20 per cent when measured in terms of permanent acquisition.

#### *Film Group Made Best Retention Record*

It might be supposed that the superior performance of the film group was due to the fact that certain items in the tests had been encountered by these children twice—once in the text and again in the films. Indeed, when the tests were scored separately for (a) those items answerable by reference to both the films and the text and (b) those items answerable by reference to the text only, it was found that immediately following the instructional period the film group was inferior to the control group in its performance upon the text-only items. It was a vastly superior performance on the text-and-film-both items that enabled this group to excel the control group in immediate learning. In the retention tests, however, the film group had entirely caught up with the nonfilm group on these same text-only items, so no sacrifice in the learning of any one part of the subject matter was made in accomplishing the film-caused increase in another part.

It should not be supposed that the superior scores of the film taught children were due to their learning a large number of facts better than the nonfilm children did at the expense of their understanding of these facts. When the tests were scored separately for achievement on "rote memory" items and "thought" items, the film taught children exhibited themselves superior on the "thought" items to an even greater extent than on the "rote memory" items. It can scarcely be said that this experiment bears out the often heard criticism of films in teaching: "they may teach the children a lot of unrelated facts but they don't make them think."

It is apparent from the way the data from the experiment were handled that the instructional gains, computed as described above, are indexes of teaching effectiveness almost entirely unclouded by such extraneous factors as pupil intelligence, maturity, extracurricular learning and the like. With reference to teaching effectiveness, therefore, we are able to conclude that in terms of retained achievement the film supplemented procedure was

35 per cent more efficient than the unsupplemented method.

Of course this finding is accompanied by a probable error. While the group of children participating in the experiment were large, they were not, of course, unlimited. Accordingly, even if this experiment were to be repeated on exactly the same kind of children in exactly the same way, the resulting numerical expression for the retained superiority of the film group would differ from 38.5 per cent by some amount, large or small. But the probable error of the result as obtained from this experiment is so small that we may assert with practical certainty that a large number of repetitions of the experiment, from which the results were averaged, would yield a film-caused superiority exceeding 20 per cent.

If the educator wishes, therefore, to accept the findings of this study with the most cautious attitude consonant with an open mind, he must conclude that the proper introduction of films into suitable branches of his instruction may be expected to bring about in five weeks of school time somewhat more learning than may be expected from six weeks of time devoted to traditional teaching methods.

### Elementary Science Models May Be Assembled at Little Cost

Science projects often come as a response to need in the minds of elementary school children. They reach a stage in the development of a unit of work where they feel an urge to express some phase of the unit. At the right time, the making and using of visual-sensory projects will aid in clarifying their ideas and give them a desirable opportunity for self-expression.

The teacher need not hesitate to allow children to work out their ideas because of the cost of construction, according to Grace Fisher Ramsey, associate curator of education, American Museum of Natural History, New York City. An ingenious teacher can help children find ways of using all kinds of materials at little or no cost in the preparation of their specimens or exhibits. Expensive and complicated apparatus has no place in elementary science work. A few tools, plenty of bottles, jars, glass tubing, old window shades, bits of cord, old newspapers, discarded cardboard, leftover paint and tin cans have endless possibilities for experiments and elementary science projects. Museum materials such as minerals, shells, skeletons, seem to accumulate almost faster than space can be found for their storage. The ten cent store, the drug store and the homes of the children themselves, are excellent and inexpensive sources of supply.

Old tin cigarette boxes make excellent places for children to store butterflies on their field trips. Mayonnaise jars are used for killing insects painlessly with a bit of cotton soaked in chloroform. Old coffee cans equipped with small electric bulbs also serve as reflectors for use in connection with microscopes and in lighting up geography projects.

# The High School Must Help Salvage American Civilization

By HARL R. DOUGLASS, Professor of Secondary Education, University of Minnesota

LET me begin by laying a few foundational premises. Public education is maintained at public expense not merely for the benefit of the individuals who are educated but for all individuals. It is easy to demonstrate that throughout the period in which battle was waged to establish a system of education at public expense, the fundamental consideration urged by Franklin, Washington, Jefferson, Adams, Madison, Mann, Barnard and all great friends of public education, was the necessity of an enlightened citizenry and leadership for the welfare of all.

Educators have drifted into the fallacy of discussing educational problems and planning educational organization and procedures almost completely from the point of view of direct profit to the individual pupil. It may be that this unfortunate tendency has had a part in hastening the present social, spiritual and economic crisis—a period in which every individual seems to be sensitive only to his own immediate interests and in which the ideals of public welfare and of political and economic honesty and fair play appear to have become formal traditions to which we pay only lip service.

## *Society's Gain Is the Individual's Profit*

To plan instruction that will best serve the individual exclusively along lines of giving him a personal advantage over other individuals is indeed a shortsighted policy. If all individuals are equally served, there is no net gain. If less than all are served, discrimination has been made. The schools do not exist for the purpose of enabling favored individuals to exploit others. A much more intelligent policy of serving the individual is that which visualizes the net gain of all individuals.

The interests of society and those of the individual are not opposed, but are largely identical. That curriculum is best for the individual which serves society by promoting social intelligence, enabling the citizenry to recognize and check malignant growths in the social body, to eradicate

*The high school cannot continue to withdraw into a cloistered academic neutrality while parasitic growths attach themselves to American democracy. The curriculum must be adapted to the times and better teachers provided*

influences encouraging crime, political dishonesty, economic exploitation of some by others and similar social ills which in recent years have become distressing. Society's gain is the individual's profit. When social ideals and practices decline, the individual's chance for happiness is reduced proportionately.

A democracy if it is to be successful demands more than enlightened leaders. Leaders find it difficult to serve only the interests of the entire group when opportunities present themselves to exploit their positions of leadership to their own profit. They also find it impossible to maintain themselves in positions of political leadership if they oppose the selfish interests of powerful, intelligent minorities who perceive the issues clearly. They cannot survive politically, even if in their opposition they serve the interest of great majorities, unless these majorities are not only well informed but are difficult to confuse or divert from the real issues by campaign shibboleths or other distractions invented to obviate clear thinking on the part of the masses. Unless a plan can be devised such as the one suggested by Plato, for selecting as leaders only those who can have no selfish interests and who serve only the good of the state, the best ensurance of social justice is an enlightened, interested and educated citizenry.

The greatest contribution to the accomplishment of this end can be made by schools. The public press has become politically and economically biased. Its editorial policy is no longer confined to its editorial pages. The influence of the church is materially lessened. The radio and the motion picture with their magnificent opportunities for education of all are both founded on bedrock commercialism of the lowest type, and little help can be expected



from those quarters. The job must be done in the school.

There has been little evidence as yet in high school classroom instruction of an understanding of the possibilities or responsibilities of the school. Educators have lost themselves in an academic and vocational forest. A hundred years hence school men of this day will doubtless be severely censured for what, seen in retrospect, will seem inexplicable stupidity or lack of vision.

#### *Present Conditions Are Deplorable*

Farmers and residents of cities are being dispossessed of their homes and means of livelihood in such large numbers that we seem to be on the verge of a return to feudalism involving a peasant class of tenants, who like their industrial brothers will be forced to yield a disproportionate share of their earnings to those whose contribution has been confined to the ability to gain control of the machine and the land.

Bungling, ignorant and careless politicians have permitted the inequities and iniquities of the obtaining system of taxation to become so unbearable that throughout the country a great part of the taxes cannot be collected, and as a consequence, important services supported by the tax receipts have been dangerously impaired. Schools have been closed by the thousand. Terms have been shortened to six, five, four and three months. Teachers have gone without salaries. Hospitals have been forced to turn away charity patients.

In some cities teachers are feeding at their own expense thousands of undernourished children for whose care no public funds are available. Police and fire protection service has been reduced. Streets have been permitted to fall into bad condition. Prisons and jails are overflowing, insanitary and in a constant state of incipient revolt. Criminals are paroled for no other reason than because there is no more room for them in penal institutions. There are long waiting lists at the state institutions for the feeble-minded and the mentally ill. And all this in spite of the fact that, as in the period previous to the depression, there is available a superabundance of labor, raw materials, machines and transportation, in other words, all the essentials except social intelligence, to remedy these conditions.

Great cities, states and even the national government pay enormous tribute to organized minorities who have become or have employed professional politicians, thus obtaining control of the governments while the great majority of citizens either have stayed at home on election days or confined their political activity to choosing between republicans and democrats, between the enemies and

friends of King George V, between beer or no beer, between Kingfishes and more dignified demagogues, between Catholics and Quakers and to voting for names and measures about which they know nothing.

The high school cannot withdraw into a cloistered academic neutrality while these parasitic growths fasten themselves upon American democracy, contenting itself with attempts to stimulate pupils to mastery of a curriculum that by its very nature can make no great contribution to the preparation of young people to solve the important problems of their times. Yet I am none too hopeful that the schools will rise to the occasion as they should.

Teachers, as a class, start with a great handicap. They have always been in school and have lived largely in an academic world. They have been reared in an atmosphere of words and textbooks. Their philosophy of education has grown up around artificial and superficial catch phrases of intellectualism and erudition. Large numbers of teachers are relatively ignorant, someone has said "moronic," with respect to the problems of their day. Their knowledge and experience, other than that related to the incidents of their immediate environment, relate largely to the formalized content of textbooks, a knowledge which conveniently remains relatively static, and which once learned demands little intellectual effort. Yet school children must rely upon these teachers for leadership in preparing themselves to understand, enjoy and improve the world into which they have been born. Teachers, even more than parents, occupy the strategic positions of leadership.

#### *Teachers Must Meet Needs of the Times*

Adjustment of the curriculum to the needs of high school pupils can be properly accomplished only after teachers have been aroused to interesting themselves in matters outside school textbooks and college courses. In other words, adapting the curriculum to the needs of twentieth century boys and girls is as much a matter of improving teachers as of improving the source of study.

If teachers fail to appreciate the needs of the times, but continue to interest themselves only in the details of an individualistic, academic and pseudovocational curriculum, while the disorientation of the American people with respect to their needs and problems and the disintegration of national ideals render impossible the glorious project of developing in the United States the world's first complete and successful democracy, then teachers must surely be the hopeless group of Ichabod Cranes and school marms they sometimes are accused of being.



# Educational Administrators Must Be More Highly Trained

*The doctor's degree does not give the prospective school administrator the knowledge and vision needed. The doctorate represents primarily the attainment of competence in a certain specialization. A higher level of attainment is imperative, but this does not imply any need for creating a new degree*

THE development of state certification for school administrative positions is in large part the result of professional training provided by universities and taken by tens of thousands of persons who realized the need for specific preparation for administrative and supervisory responsibilities.

The beneficial results of such training have been so apparent and the voluntary acceptance of the professional obligation to take it has been so widespread that the state governments are more and more finding support in making advanced professional training for administrative positions a prerequisite for eligibility for appointments to such positions.

Reller's report<sup>1</sup> on state certification for administrative positions shows that admission to the following positions is limited to those who hold state certificates of specific qualification: superintendencies, in twenty-two states; supervising principalships, in two states; supervisorships, in sixteen states; high school principalships, in eight states, and elementary school principalships, in nine states. The states that are making the most extensive use of such certification are Alabama, Delaware, Indiana, New Jersey, Pennsylvania, Utah and Wyoming.

Dr. Ellwood P. Cubberley pointed the way

By JAMES COLLINS MILLER  
Professor of Educational Administration  
University of Pennsylvania

twenty-six years ago. In his statements of 1926 and 1928, Dr. George D. Strayer presented what, in his judgment, should be the essential elements in the advanced professional training of those who aspire to the superintendency.<sup>2</sup>

A complete program suggested by Doctor Strayer—and there should be general agreement regarding its desirability—would require at least four years, or the equivalent of four years, of graduate education. The product of such a training program should soon become representative of the highest type of leadership in the field of educational administration. It would place the profession of education on the same high level as that of law, medicine and the ministry, with respect to the training of its leaders. The colleges of education, however, have to deal with actualities and take each step in the direction of the ideal as rapidly, and only as rapidly, as it is feasible to do so.

## *What Schools of Education Are Doing*

In the light of the judgment of leaders, and in the light of the new requirements for state certification for administrative and supervisory positions, a number of schools of education have attempted to set up a curriculum or an orientation of graduate courses that would be suitable as preparation for each of the field positions in question. This orientation is usually indicated by listing required, preferred, alternative and elective courses. According to information received recently from ten schools of education, such orientation of graduate training in relation to specific field service positions has reached a status somewhat as follows:

Dean Shelton Phelps, George Peabody College for Teachers, says: "I had a letter this morning

<sup>1</sup>Reller, Theodore L., *State Certification for Administrative Positions*, Division of Educational Administration, School of Education, University of Pennsylvania, 1933.

<sup>2</sup>Strayer, G. D., *Job Analysis and the Problem Attack in the Training of Superintendents of Schools*, Fifteenth Yearbook of the National Society of College Teachers of Education, p. 147, 1926, and *Professional Training of School Executives in the University*, Official Report, Department of Superintendence, pp. 96-101, 1928.

from Dr. Henry W. Holmes of Harvard, in which he used the sentence: 'We have no system of majors and minors and no fixed rules about the selection of courses. Everything is done strictly on the basis of individual advice.' This, it seems to me, is the ideal method for work."

Dean William S. Gray, School of Education, University of Chicago, states: "An all-university committee on the preparation of teachers was organized recently which I hope will consider specifically sometime during the coming year the requirements for various types of school offices."

Dean C. J. Anderson, University of Wisconsin, says: "We do not set up specific curriculum requirements for specific administrative positions. These come under the general provisions for the master's degree, requiring a field of concentration which may be administration or supervision. The student selects the field of concentration which will be in accord with the position he hopes to assume."

#### *Students Select Own Courses at Harvard*

Dean Henry W. Holmes, Harvard University, says: "We advise each student in this school concerning his choice of courses, and his final decision is made on the basis of our advice and is strictly an individual matter. We do publish in our catalogue, however, 'Suggested Curricula.' Departures from these curricula may be made freely by any student, but his individual program must always be approved by his adviser. We do not find it necessary to require any particular course or set of courses, because we have a general examination for the master's degree and a requirement of apprenticeship. These tests for final power, both theoretical and practical, seem to us more reliable as a means of giving continuity and point to a student's program than any requirement of specific courses. A student in this school may omit any course from his program, no matter how essential the faculty considers the course in general to be."

In the other institutions, the University of California, Indiana University, the University of Iowa, the University of Pittsburgh, Stanford University and Teachers College, Columbia University, more or less detailed specifications of required, alternative and elective courses are indicated. From an analysis of the specifications set forth in the catalogues of these institutions it appears that the preferred courses for preparation for administrative positions, including those required, may be represented as follows:<sup>1</sup>

1. For those preparing to be school superintendents—*school administration*, state school administration, *supervision of instruction*, *educational*

*tests and measurements*, *elementary statistical methods*, school finance, school budgets and accounting, business management, *school records*, *reports and publicity*, *school organization and management*, school surveys, personnel problems in school administration, school buildings and hygiene; secondary school administration, supervision of secondary education, secondary school curricula, principles of secondary education, organization and management of vocational education, methods and supervision of vocational education, guidance, junior high schools; elementary school administration, supervision of elementary education, elementary school curriculum, principles of elementary education; *history of education*, comparative education, *philosophy of education*, *educational psychology*, educational sociology; introduction to educational research, preparation of thesis.

2. For those preparing to be secondary school principals—*administration of secondary schools*, supervision of secondary education, junior high school, school administration, organization and administration of vocational education, secondary school curricula, educational and vocational guidance, educational tests and measurements, *elementary statistical methods*, introduction to educational research, survey of character education, educational diagnosis and remedial instruction, methods of secondary school teaching, organization and administration of extracurricular activities; philosophy of education, comparative education, educational sociology, history of education, educational psychology; school surveys, school buildings, *records and reports*, school finance, budgets and accounting, personnel administration.

#### *Courses for Elementary Principals and Supervisors*

3. For those preparing to be elementary school principals—*administration of elementary schools*, supervision of elementary education, elementary school curriculum, activity programs in elementary education, *school administration*, educational tests and measurements, *elementary statistical methods*, introduction to educational research, methods in elementary school teaching, survey of character education, guidance function in education, hygiene and health education, educative process; history of education, philosophy of education, *educational psychology*, comparative education; state school administration, school finance, health education, school surveys, school buildings, vocational education, *records and reports*.

4. For those preparing to be general elementary school supervisors—*principles and procedures in supervision of instruction*, supervision of elementary school instruction, supervision of elementary

<sup>1</sup>According to Reller's study one or more of the states require the courses that are italicized in the lists given here.

*school curriculum*, principles of elementary education, school administration, elementary school administration, *school organization and management*, modern practice and experiment in education, *educational tests and measurements*, elementary statistical methods, introduction to educational research, personnel problems in school administration, guidance, methods of mental diagnosis, hygiene and health education; history of education, philosophy of education, educational sociology, *educational psychology*; school finance, budgets and accounting, records and reports, state school administration.

Nearly all of the above courses that are not italicized appear in the suggested supplementary lists of one or more of the states. In addition, the following courses appear in the suggested lists: as suitable for prospective superintendents—school law, methods in mental diagnosis and rural education; as suitable for prospective secondary school principals—school law, business administration of secondary schools, psychology of secondary school subjects, psychology of adolescence and history of secondary education; as suitable for elementary school principals—school law, psychology of childhood and educational sociology; as suitable for supervisors—school law and psychology of childhood. More recently analyses such as those made

by Ayer, by the Department of Elementary School Principals and by the Department of Secondary School Principals, have had a definite influence.

The approach to the problem thus far considered used the field service position as the center around which to organize and develop instructional units. The second approach, to which attention is now directed, divides the educational service into its major functional aspects, within each of which may be found a principle of unity for the inclusion and organization of instructional material.

The following functional aspects have been selected in preparing the accompanying table: personnel, curriculum, methods, measurements, supervision, administration, research and background. The selection and organization of courses required to master each of these functions may follow the lines suggested in the table.

This second method of approach has the following advantages over the first method:

1. Majoring would be on the basis of function, so that a student might become increasingly expert in a particular function with requisite strength in the functions most intimately associated with the major. His time and energy would be saved.

2. With one function as the major, there would not be so wide a spread in the requisite background. Therefore, the student would have a better chance

INSTRUCTIONAL ORGANIZATION BASED ON A FUNCTIONAL CLASSIFICATION OF FIELD SERVICE ACTIVITIES<sup>1</sup>

Functions	Major Problem	Courses
Personnel	The physical, emotional, social and mental health and growth at each level of maturity.	A series of courses each applicable to a level, or group of levels, e.g.: "The Social Growth of the Preschool Child"; "Educational Guidance," and "Pupil Control."
Curriculum	The selection and organization of the educative activities most conducive to physical, emotional, social and mental health and growth at each level of maturity.	A series of courses each applicable to a level, or group of levels, e.g.: "Activities for Mental Development of Preschool Children," and "Elementary School Curriculum."
Methods	The discovery of the best methods of learning and of teaching at each level of maturity and in each type of activity and development of skill in their use.	A series of courses, each applicable to the level of maturity of the learner and the nature of the activity, e.g.: "Method of Teaching Primary Reading."
Measurements	The discovery and the development of efficiency in the use of the best techniques of ascertaining status with precision at every level and in every type of activity.	A series of courses developing the principles and techniques of measuring, and their application to each type of educative activity, e.g.: "Measurement of Comprehension in Reading."
Supervision	To oversee and to aid in facilitating the processes of teaching and of learning at each level and in every type of activity.	A series of courses developing the principles and techniques of supervision, and their application at each level and to each type of educative activity, e.g.: "Principles of Supervision," and "Supervision of Reading."
Administration	To provide the financial, physical, and personnel facilities that will be most conducive to the attainment of accepted objectives of the educational service at each level.	A series of courses dealing with major problems, e.g.: "Financing and Budgeting"; "Physical Plant for an Educational System"; "Personnel Administration," and "Public Relations."
Research	To carry on not only a continuous process of analysis of that which is but also contribute new knowledge and understanding of each phase of the service.	A series of courses developing guiding principles in research and skill in the use of research, e.g.: "Statistics," and "Scientific Method of Research."
Background	To give the necessary scientific, historical, and philosophical knowledge to ensure not only technical efficiency in processes but also unity and direction of effort.	A series of courses dealing with major elements that make up needed background, e.g.: "Educational Psychology"; "History of Education," and "Educational Sociology."

<sup>1</sup>Levels: Preschool; nursery school; kindergarten-primary; elementary; junior-secondary; senior-secondary, including junior college; senior college; university, and graduate schools.



to master his problem and to gain the scientific knowledge requisite for its full understanding and proper interpretation. It would bring the student's work within measurable limits. The field service organization requires contact with so many different functions and types of problems, each with its own special requirements in terms of technical procedure and background, that it is impossible for a student, in the time available, to develop an adequate basis for all functions or to study carefully all aspects of his field assignment.

3. Continuous and progressive research with respect to each function would be facilitated, since all subsequent research done by the individual student could be based upon research already completed. The student's increased knowledge of and skill in the specific function, and his greater mastery of the associated background would enable him to do work of greater significance and value. He would not be shifted about from problems in one function to problems in another, for no one of which he might possess the requisite knowledge, skill and background.

If the field service position approach is used, the units to be included in each orientation must deal with the several functions according to the extent to which they come within the assignments normally associated with the respective field service positions. If the second method of approach, that of the functional aspects of the service, is used, the units to be included under each major function must be planned so as to make it possible for those who desire to prepare for specific field positions to secure instruction with respect to the functions for which they will be responsible.

#### *The Two Plans Must Be Clarified*

Each method of approach has its advantages and disadvantages. The first approach appears to serve best the purposes of the strictly professional school, which trains for specific positions in the field service. The second approach appears to serve best the purposes of progressive research and the advancement of higher scholarship in the profession of education.

Schools of education that attempt to use both these types of service should include within their programs both these approaches and should organize their instructional offerings accordingly. At the present time, there is a more or less confused intermingling of the two plans, neither being carried through consistently. There is a need for a clarification, a differentiation and a well thought out interrelation of the two plans, so that both the needs of the field service and the needs for progressive research and advancing scholarship may be met more adequately.

The need for improvement in the selection, differentiation and sequential arrangement of the training for future educational leaders is such as to require the intensive attention and the constructive effort of the institutions that have assumed the responsibility of such training.

The vision of educational leaders, both in the field service and in the training institutions, must be more inclusive. They must view the human situation from a higher plane than that found within the limits of the specializations within the profession.

#### *Higher Level of Attainment Is Needed*

The political and the educational implications of educational theory and practice represent problems that are vital to the solution of the difficulties that are being experienced at the present time in the United States and in all other countries. With the vision that can come only from viewing the organization of humanity from these different angles, educational statesmen will be in a better position to lead in caring for the social, political and economic interrelationships of educational policies, plans and procedures.

The attainment of such knowledge and breadth of vision is more than can be expected during the training that leads to the doctor's degree. While the doctor's degree should represent the laying of the foundation for the development of such knowledge and vision, it represents primarily the attainment of competence in a specialization within the field of education itself. What is really needed, is a new and higher level of professional effort and attainment beyond that represented by the doctorate. I do not mean to imply that there is a need for creating a new and more advanced degree.

Those qualifying for advanced leadership in educational administration or in the training of educational administrators should make every effort to: (1) attain the more adequate and more inclusive knowledge and the broader vision that are essential for leadership within the field of education itself, and also for developing interrelations of the educational services with those of sociology, economics and politics; (2) increase and develop the cooperative activities between the leaders in the field service and those in the training institutions; (3) stimulate, through advanced seminars, conferences and research institutes, organized effort toward higher professional attainment and substantive professional contributions; (4) develop and sustain cooperation between educational leaders and the leaders in the sociologic, economic and political fields for the investigation of problems, the solution of which, because of the interrelations involved, necessitates cooperation.

# How High School Pupils React to Ability Grouping

By H. D. RICHARDSON

Deerfield-Shields Township High School, Highland Park, Ill.

THE arguments for and against ability grouping as a means of providing for individual differences have been presented from time to time and the question of the attitude such a scheme engenders in the minds of pupils is one of the factors most often discussed. Late investigators of the attitudes of pupils themselves as expressed through a questionnaire report find "that the great majority are happy and satisfied, that they look on school as a serious business from which they want to get the most possible and that they accept and believe in the grouping that exists as the best situation for them."

It seems that this question has two sides like most others, and that what is needed is some evidence from actual situations where ability grouping is practiced. If a study of these situations reveals that unhappy and discouraged individuals are eventually produced in the inferior group, and elated, egotistical and domineering individuals result from superior classification, then the question would seem to be pretty well answered.

It may be difficult to obtain objective and reliable data on the attitude of individuals with respect to some event or activity of their lives, but in everyday affairs if a person is asked to state how he feels about an issue we accept his answer and assume that he would answer in a similar fashion the next day unless he had become the victim of coercion. It seems to be common sense to treat pupils in school in a like manner. If we want to know how they feel about ability grouping, why not ask them? Assure them that their answers will not be used against them, and that they are not compelled to answer the questions if they have any reservations

*In an effort to discover the attitude of pupils toward ability grouping the Deerfield-Shields Township High School submitted a questionnaire to its freshmen pupils. These pupils had been in school thirteen weeks and were reasonably familiar with the effect of the plan on their school work. The results showed that 90 per cent of this group heartily approved this method of teaching*

about the subject. Tell them frankly the purpose of the questions, and expect that they will be equally frank in answering them.

The following study was undertaken largely on the above assumptions. The freshmen pupils at the Deerfield-Shields Township High School, Highland Park, Ill., are placed in ability groups in English and mathematics. Placement in ability groups is based upon mental and achievement test scores, intelligence quotients and estimates of general scholastic ability by elementary teachers. Approximately 340 pupils constitute the freshmen group. Those involved in this study had been in high school thirteen weeks, had had two six-weeks reports of their work, were reasonably well acquainted with their success or failure in the classes in question, and had, no doubt, formed some opinions concerning their welfare and treatment in the high school.

## *Pupils Divided Into Three Groups*

A questionnaire was devised, the answers to which would indicate rather objectively the attitude of superior, average and inferior pupils (classified as X, Y and Z groups) toward the two subjects, English and mathematics, in which they were placed on the basis of ability. The questionnaire submitted to the X group is reproduced here. The questions for the Y and Z groups were altered to fit their "grouping" as "average" and "inferior" pupils.

The questionnaire was administered by me in the various class groups. Directions were given as follows: "The purpose of this questionnaire is stated in the paragraph at the top of the sheet addressed

to the student. I will read it aloud and you read it silently." After this paragraph had been read attention was directed to the three blanks in the first three questions. "Write in each of the three blanks in the first three questions the name of the class you are now in." After this had been done, "In answering the questions on this sheet you are to think only of the class you are now in, and no other.

"The questions are about the ability grouping plan. By that we mean the fact that you are placed in an X, Y or Z group in English and mathematics when you come to high school. The first four questions are to be answered by placing an X in front of the answer which best tells your judgment. The questions on the bottom half of the page are to be answered by writing yes or no. You do not need to put your name on this paper, and your teacher will not see your answers. Work as rapidly as you can, and ask questions if there are words which you do not understand." Practically everyone was given time enough to finish.

Everyone cooperated willingly and on the whole they seemed to enjoy the experience. Few questions were asked. A few had difficulty with Questions 5 and 6. It was explained by saying that in the elementary schools from which they came the pupils had not been placed in X, Y and Z groups. In high school they had. Which system did they like better?

### *Grouping Serves to Stimulate Pupils*

From a study of the results the following statements may be made by way of summary:

1. On the average about 93 per cent of the pupils thought they had been placed where the work was about right for them. About 10 per cent of the Z's thought their work too easy in both English and mathematics. About 9 per cent of the X's thought their mathematics too hard for them.

2. Practically all of the X and Y pupils accepted their placement in these two subjects with satisfaction or without feeling. Fifteen per cent of the Z's in English and 7 per cent in mathematics were very much dissatisfied with it.

3. Practically all said they were trying to do their work so they would remain in the section they were in or would be placed in a higher section. The percentage trying to do their work so that they would be placed in a higher section was large enough to indicate that ability grouping serves as a motive or challenge to work up to capacity. Hardly anyone admitted that he wanted to be placed in an easier section.

4. Nearly all of the X and Y pupils in both English and mathematics thought they had been placed in an ability group where they would work most

successfully. About 10 per cent of the Z's in both subjects felt they had been classified and labeled and about 13 per cent of the mathematics group felt that their chances for success had been hindered.

5. The percentage who had developed an unhappy attitude because of remarks of teachers was fortunately low. The Y group in English was highest, with 8 per cent claiming that they had been made to feel "just average." This may not be an unfortunate attitude for them. Four or 5 per cent of the Z's had been led to think of them-

### X STUDENT QUESTIONNAIRE

To the Student:

We want to know how well you like your school work in English and Mathematics, and whether you are happy in the class group you are now in. Please answer frankly the questions which follow. You do not need to put your name on this paper.

Put an X in front of the answer which best tells your judgment.

1. Do you *think* you have been placed in a section in .....that is
  - (a) too easy for you?
  - (b) about right for you?
  - (c) too hard for you?
2. How do you *feel* about your placement in.....?
  - (a) well satisfied with it.
  - (b) accepted it without any feeling about it.
  - (c) very much dissatisfied with it.
3. Since you have been placed in an X section in..... have you tried to do your work
  - (a) so that you will be certain to remain in an X group?
  - (b) so that you will probably be changed to an easier group?
  - (c) so that you will lead the group you are now in?
4. Do you feel that the ability grouping plan
  - (a) classifies and labels you permanently?
  - (b) places you where you will probably work most successfully?
  - (c) places you where your chances for success are hindered?

Write "Yes" or "No" for your answer.

1. Have your teachers ever said things to you that made you feel that you are "unusually bright," decidedly better than the "average," a superior individual, because you were placed in an X group?
2. Have your parents ever said things that made you feel conceited, self-important, or proud of yourself, because you were in an X group?
3. Have your fellow students ever said things that made you feel that you were exceptional, unusually important, or brilliant, because you were placed in an X group?
4. Have you come to feel that you are a superior person, far above the "common lot," or self-conceited, because you have been placed in an X group?
5. Do you think it would have been to your advantage not to have been placed in an ability group, as in the elementary school?
6. Would you feel happier had you not been placed in an ability group, as in the elementary school?
7. Would you vote to do away with the ability grouping plan?



selves as inferior due to remarks made by their teachers.

6. Parents' remarks were reflected in the attitude of 7 per cent of the X mathematics pupils, 14 per cent of the Y English pupils, twenty-four per cent of the Y mathematics pupils, 9 per cent of the Z English pupils and 14 per cent of the Z mathematics pupils. It appears that parents have a greater part in the formation of undesirable attitudes at all levels than do teachers. Parents may need guidance along these lines. Discouraging remarks from them may undo all that the school has been able to accomplish in adjusting its offerings to the abilities of the individual.

7. Remarks of fellow pupils affected strongly the attitude of the Z group. Nineteen and 17 per cent, respectively, of the English and mathematics pupils in the Z section stated that they had been subjected to unkind and inconsiderate remarks from fellow pupils. This question for the Y pupils is not quite comparable to questions for the X and Z pupils.

8. When it comes to an admission of superiority or conceit none of the X pupils were frank enough to acknowledge it. Only 6 per cent of the Y group had resigned themselves to the average lot and come to believe that it is of little use to do better than average work. Of the Z pupils in English, 24 per cent acknowledged inferiority feelings, and 17 per cent of the Z's in mathematics were likewise convinced that they were of little or no account. When it is remembered that the Z group did not exceed 25 per cent of the freshmen enrollment, it will appear that at the most but 5 per cent of the entire freshmen group had attitudes of inferiority, and probably the majority of these were of a wholesome rather than of a morbid nature.

9. With regard to thinking and feeling whether they would have been better off had they not been placed in ability groups, a small percentage of the X English and mathematics pupils thought so; approximately 7 per cent of the Y students and 25 per cent of the Z students were of this opinion. The percentage of Z's who thought they would have been better off and were consequently unhappy agrees quite closely with the percentage who acknowledged inferiority feelings. It should be noted that in all groups, thoughts and feelings did not parallel each other to an unusually close degree.

10. When the vote was cast hardly anyone in the X group wished to do away with the ability grouping plan. About 10 per cent of the Y group and 17 per cent of the Z group would have no more of it. Of 341 freshmen English pupils who voted, 32 or approximately 10 per cent voted to do away with the plan. Three hundred fifteen mathematics pu-

pils voted and 33, or approximately 10 per cent, voted to do away with ability grouping. In other words, 9 out of every 10 of the freshmen preferred ability grouping.

11. There was little difference in the general attitude toward ability grouping in English and mathematics. The percentage of pupils for each question was approximately the same in both subjects. The attitudes engendered by grouping in English were substantially the same in kind and extent as those engendered by grouping in mathematics.

#### *Majority of Pupils Favor Plan*

In conclusion then, it seems that the freshmen pupils questioned at the Deerfield-Shields Township High School were overwhelmingly in favor of ability grouping in English and mathematics. There was little evidence, so far as admissions from pupils themselves can be relied upon, that adverse or unwholesome attitudes resulted in the X and Y sections. In these two sections the remarks of parents seem to be most potent in determining unwholesome attitudes, particularly in the Y group.

The results from the Z section were not as favorable. On the whole about a fifth of this group had an inferior opinion of their ability, were unhappy and disposed to think that they would be better off had they not been placed in an ability group. Relatively, however, this number is not large, and many of these pupils were far from morbid concerning their hopelessness. Many were facing the hard facts. They were less able to do school work than were many others whom they knew as elementary schoolmates. They naturally rationalized the situation and blamed the ability grouping plan or something else—as do many of their parents. Guidance and sympathy they needed, but sentimentalism and false hopes would have done them little good.

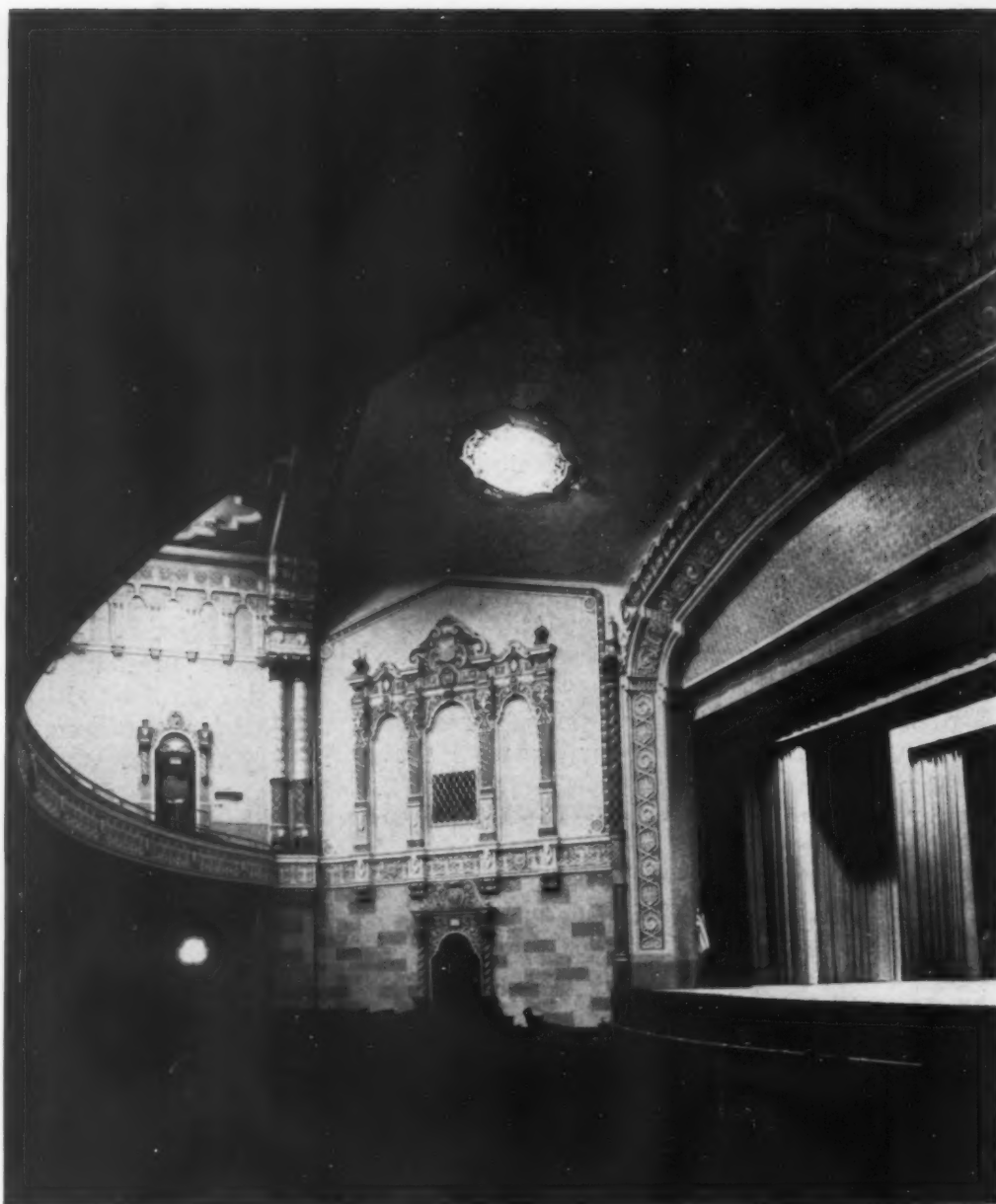
#### *System Merits Further Study*

These 5 per cent to 10 per cent who were discouraged and unhappy would likely be dissatisfied if they were in ungrouped classes competing with more gifted pupils and always finding low or failing grades the reward for their efforts. As long as pupils must be taught in groups it seems that a plan for grouping which merits the approval of 90 per cent of the pupils, which aims to help everyone appraise frankly and honestly his abilities and talents and which provides a wide range of experiences to encourage their development under sympathetic guidance, is wholly desirable. Its continued perfection, rather than its abrupt rejection, is to be sought.

*The school is in an outlying district and hence requires an auditorium large enough to serve regional community as well as school needs. The room seats 2,400 persons.*

THE Thomas M. Cooley High School, bearing the honored name of the judge whose decision in the celebrated Kalamazoo high school case in 1871 settled for all time the status of the secondary school as a tax supported institution, represents Detroit's most recent contribution to high school architecture.

Detroit has long been committed to a social point of view and this has influenced the program of its schools. The ideal of social service lies behind all educational activity. Its curricula and its instruction seek to emphasize the relationship of the individual child to the problems of modern life. The schools have sought to test the results of instruction in terms of the pupil's ability to face real social situations and to acquire interests and purposes that are useful to society. They have also recognized individual differences between children and have attempted to adjust educational oppor-



## New Secondary School Educational and

By CHARLES L. SPAIN,

tunities to meet the requirements of each child.

To house the educational program implied by the realization of these ideals requires complex and highly differentiated facilities. In the earlier days when we sought merely to provide for the scholastic needs of youth in traditional schools, with limited curricula comprising only formal subject matter to be acquired from books, a simple and undifferentiated building served every purpose. Today, in response to the demands of an



*This striking night picture shows the beautiful main entrance of the school. The building is open fourteen hours a day serving the children and adults of the community.*

## Designed to Serve Both Community Needs

Detroit Public Schools

industrial age and its varied requirements, we are thinking educationally in different terms. Schools are no longer alike in various communities or even in the same city. The type and character of a school and its program can be determined only after a careful survey of the community and its present needs and possible future tendencies.

A secondary school today, especially in a large industrial center, must be prepared to deal with a heterogeneous group of pupils with widely vary-

sensitive to social and industrial changes. It must take a realistic view of life and shape its program accordingly.

The secondary school, if it is to realize its greatest possibilities, must deal with adolescent nature in all of its varied phases. It must consider the physical and emotional as well as the intellectual aspects of adolescent nature. It must offer an opportunity for interesting and worth while social and leisure time activities. It must supply guid-

ing social and economic backgrounds. The school must still undertake to broaden the cultural outlook of its pupils. In addition, it must concern itself with the economic, social, political and occupational aspects of this age as they affect the pupil's present life and probable future career. If the secondary school is to prepare young people for successful participation in a rapidly changing social and industrial life, it must remain





*The library is two stories in height. Adjoining it are four conference rooms, a small lecture room and the library office.*

ance of various kinds. It must provide such auxiliary agencies as libraries, cafeterias and rest rooms to care for intellectual and physical requirements.

The Thomas M. Cooley High School, unlike high schools previously developed in Detroit, was planned to include all of the facilities required by the socialized high school program and, at the same time, to conform to the demands of efficient and economic school planning.

The building, situated in an outlying district remote from other high schools, required an auditorium large enough to serve regional community needs as well as school needs. This auditorium, three stories high, is placed in the center of the building with banks of rooms on two sides, health units in the rear and library and administrative units in the front. Corridors on all sides of the auditorium permit free circulation of traffic and make possible numerous exits from the main floor of the auditorium, from the balcony and from the stage. Schoolrooms on the side and rear corridors adjoining the auditorium afford ample space for dressing rooms and for the housing of large groups of persons participating in performances on the stage. The auditorium, provided with a large, well equipped stage and public address system, has a seating capacity of 2,400 persons.

On the first floor opposite the auditorium entrance a portion of the front corridor has been

expanded to form an exhibit gallery or display space and to provide at the same time an attractive setting for the entrance to the auditorium. At the front of the building and accessible through the exhibit space is a suite of administrative offices, including space for the principal and assistant principal, with an adjoining waiting room, small offices for guidance officers, a bookstore and a filing room with fireproof vault.

A cafeteria with accommodations for 500 pupils is located in the north wing of the first floor. The lunch unit opens directly on the play field. A kitchen 22 feet by 50 feet with adjoining storage space is placed in the rear and adjacent to a receiving platform. There is also a lunchroom for teachers.

On the first floor at the rear of the building is the health unit including two gymnasiums each 90 feet by 60 feet. A movable soundproof partition between them may be removed to make a gymnasium 90 feet by 120 feet for demonstrations and competitive games. This unit also includes two pools each 50 feet by 25 feet. A movable gate and soundproof partitions make available for competitive sports a pool 25 feet by 100 feet.<sup>1</sup> Adjacent to the pools are shower and locker rooms for both boys and girls.

The library, two stories in height, is on the front

<sup>1</sup>For a description of this type of swimming pool see *The NATION'S SCHOOLS*, March, 1933, p. 37.



elevation on the second floor. Adjoining the library are four conference rooms each 11 feet by 14 feet, a small lecture room and a library office. Study halls on the second and third floors are arranged in close proximity to the library.

Two biologic laboratories with a lecture room between are found on the first floor. Similar accommodations are arranged for chemistry on the second floor above this suite and for physics on the third floor. The home economics department has a suite of rooms on the second floor and

the commercial department occupies a similar suite on the third floor.

A visual room 16 feet by 32 feet is available for all classes using visual aids. On the third floor are an art exhibit room 16 feet by 22 feet adjacent to the art studio and two soundproof music rooms with an adjoining large room for the storage of

*The cafeteria, a section of which is shown above, is an important unit in the health program. The cafeteria opens directly on the play field. Divided stairways (right) are used to facilitate the movement of traffic.*



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instruments. Other special rooms include offices for the dentist and the physician with a common waiting room, a student publication room, a receiving room, a room for dramatics and numerous small auxiliary and storage rooms.

The school is situated on a site of fourteen acres so that there is ample space for recreation.

This building with its auditorium, cafeteria, health facilities and varied school activities is an evening and summer school center. The people of

the vicinity meet there for community and civic undertakings of all kinds. Planned to house a modern, socialized high school program, the building is serving its purpose well and is giving the utmost in satisfaction to the children and parents of the community. It is believed that this building, constructed on a unit plan with varied facilities representing the basically important kinds of experience that pupils are likely to need, will continue to serve its community for many years.

## What the Architect Faced in Planning the School

By ALEX G. DONALDSON and HENRY W. MEIER  
Architects, Detroit

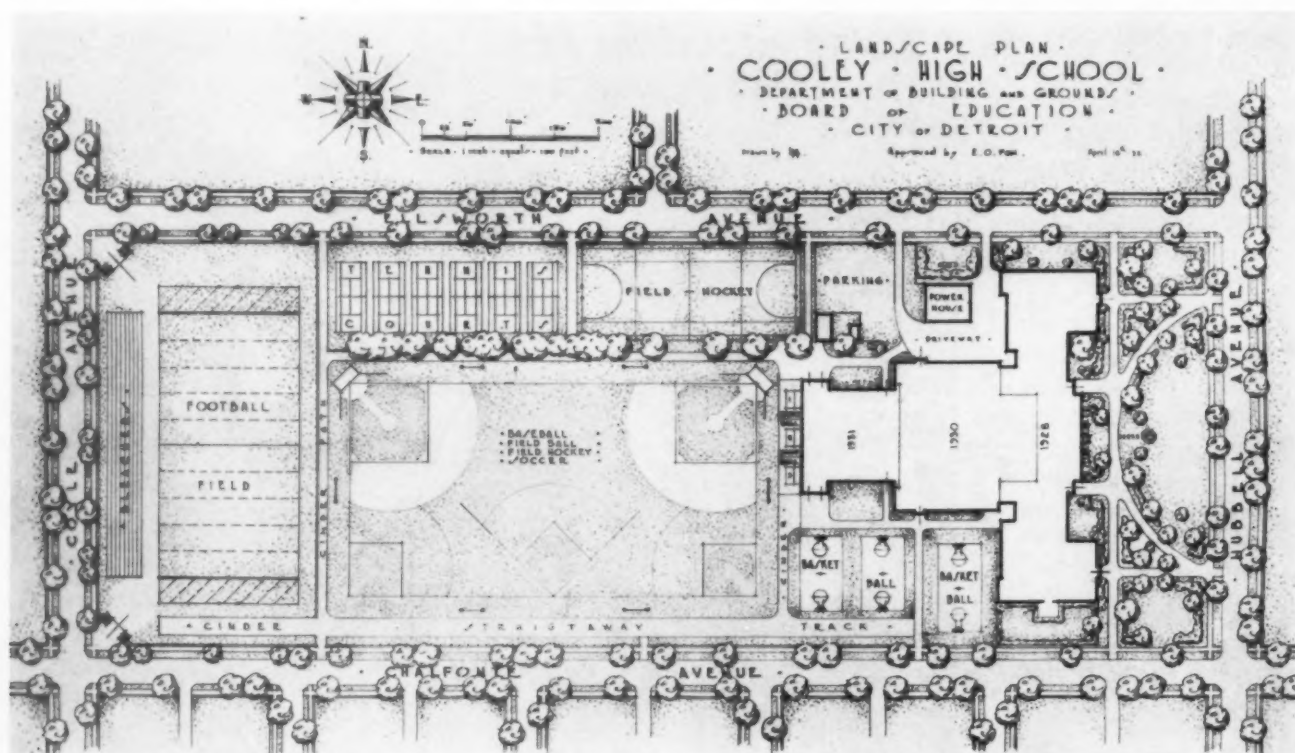
**P**REPARING plans for a large modern high school is a complex architectural problem. There are the many requirements and demands of the educational department. In addition there are building and fire regulations that also govern the planning. The building of Thomas M. Cooley High School was just this kind of problem.

This school is situated in the northwest section of Detroit on the west side of Hubbell avenue, between Chalfonte and Ellsworth avenues. The school grounds cover five normal city blocks. The front of the school facing Hubbell avenue is 402 feet long and the total depth is 350 feet. Reen-

forced concrete construction is used throughout.

In addition to the space occupied by the building, there is enclosed space for an athletic field. This field provides for two baseball diamonds, four softball diamonds, two football fields, three outdoor basketball courts, four tennis courts, an ice skating pond 125 feet by 250 feet and a cinder running track. There is also space for two field hockey grounds and a soccer field.

Because sufficient funds could not be appropriated at one time, the school had to be planned and erected in three units. The first unit facing Hubbell avenue was built in 1928. The auditorium, the







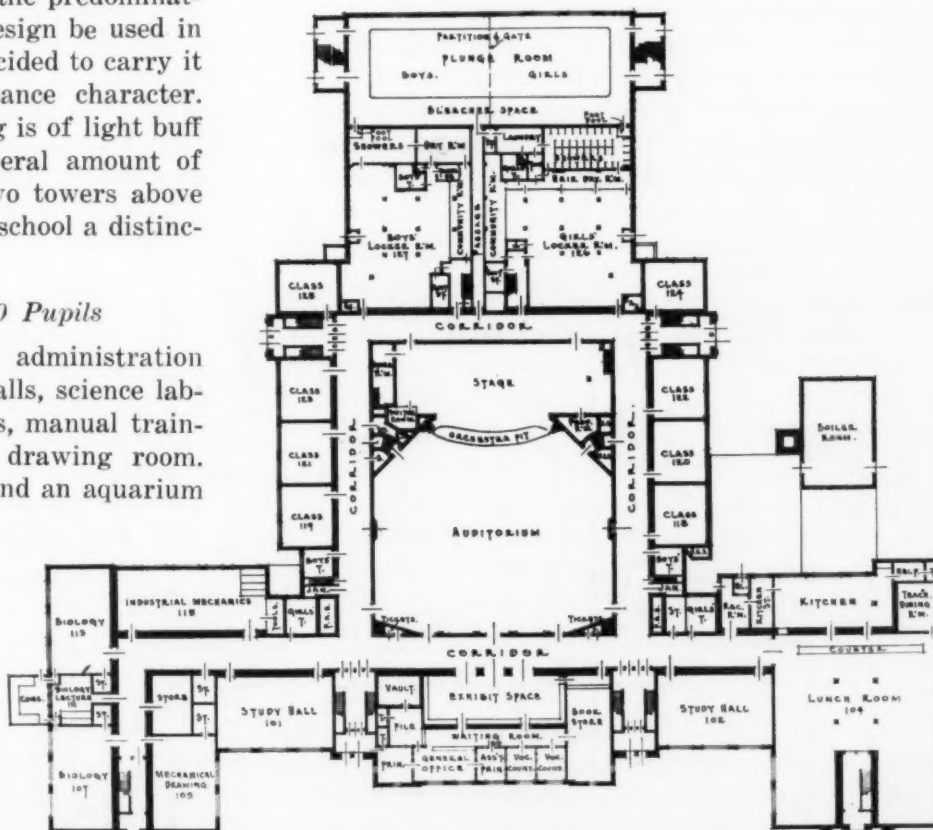
second unit, was erected in 1929. The third or health unit, which completes the school, was built in 1931.

It was the desire of the board of education that a variation from the predominating type of architectural design be used in this building and it was decided to carry it out in a Spanish Renaissance character. The exterior of the building is of light buff iron spot brick with a liberal amount of brown terra cotta. The two towers above the main entrance give the school a distinctive appearance.

#### *Cafeteria Seats 500 Pupils*

The first unit contains administration offices, classrooms, study halls, science laboratories and lecture rooms, manual training room and mechanical drawing room. There are a conservatory and an aquarium at the south end and a large lunchroom accommodating 500 pupils at one sitting. This room is 70 feet by 80 feet and is equipped as a serve-self in the most modern manner. There are also a bookstore and an exhibition space.

*Above is a front view of the building. Below is the first floor arrangement. The health unit is at the rear, immediately behind the auditorium.*





# The P. T. A.—What It Can Do to Help the School

*Education of the child is a dual responsibility of parents and schools. Close teamwork between the two is imperative. The P.T.A. is the best means of attaining this end*

By MRS. E. E. MILLER, Parent-Teacher Association, Parsons, Kan.

**A**BRAMHAM LINCOLN once attended a committee meeting where a program was being planned for reconstruction. He was asked to state what items should be written in the report. His reply was, "I care not what else is written on that sheet, so long as 'unity' is written at the top."

There is an ever increasing demand for unity in our complex social order. The education of our children is a partnership job. Teachers and parents must work together to ensure the child's complete development—physical, mental, moral and spiritual. Parents expect many things of the school, and it is only fair that the school should receive cooperation from the parents. By unity and cooperation is meant understanding teamwork in everything that touches the life of the child.

School is one of the most important things in a child's life, and the time spent there should be happy and peaceful as well as educational. Parents can help make it so, if they will stand side by side with the teacher. Parents are solely responsible for the guidance of their children until they enter school. Their responsibility, however, is not lessened when the child enters school; it is simply supplemented by the specialized training provided by the school.

## *The School's Challenge to the Home*

Formerly parents turned the child over to the school with the "now see what you can do with him" attitude. It is only recently that the school has started to shift back to the parents their share of the responsibility of providing the child with life equipment. The school has done this not in a spirit of defeat but in a spirit of partnership. Home and school leagues, parent-teacher associations and visiting teachers, are manifestations of the school's challenge to the home to help, to cooperate, to unify and to gather together the forces of life that they may unitedly gain all the objectives of education.

It is difficult for parents to accept this challenge. The average parent has been out of touch with the school for so long that he hesitates to become too curious or too interested. He feels like an outsider, not because the school has relegated him to this place, but because he has allowed the teacher to shoulder the entire responsibility of educating the child.

But now that much more is expected of the schools than merely teaching the three R's, the home must cooperate in dealing intelligently and effectively with youth if there is to be a clear understanding of the whole child. Parents, however, look to the teachers to take the initiative in securing this cooperation. They have accepted for years, and still accept, the teachers as leaders in things educational in the community.

## *A Dual Responsibility*

The school cannot do its work properly without certain information that only the parents can supply. The attitude of children toward the school program is determined largely by the response their parents make to the work they are doing. Any movement that brings parents and teachers together for the sake of understanding the children better will contribute in a large measure to the realization of the aims and purposes of the school. Teachers, principals and superintendents know how to develop an improved school and community program for boys and girls, but they must have the support of the parents if this program is to be accepted and financed by the community.

The home and the school are factors that must unify life—the home is a school and the school must be a home, and the two must unite their best efforts in order to create a desirable community.

Education has done well to set up as its seven objectives health and safety; worthy home membership; tools, techniques and the spirit of learning; citizenship; vocational and economic



effectiveness; wise use of leisure, and ethical character. But what rules in the game of life will ensure the pupil's arrival at each of the seven goals?

The home and the school are both responsible for shaping the rules that will ensure the arrival of each child at these goals. These objectives can be achieved if there is cooperation between the home and the school. It was such a conception of united effort that caused Theodore Roosevelt to say, "The parent-teacher association is the most fundamentally constructive force in the world today."

#### *P. T. A.'s Have a Long Way to Go*

It is generally admitted that parent-teacher associations have not yet begun to function as they should. It is a long road from the humble beginnings of these groups to their present objectives, which are: (1) to promote child welfare in the home, the school, the church and the community; to raise the standards of home life; to secure more adequate laws for the care and protection of women and children, and (2) to bring into closer relation the home and the school, in order that parents and teachers may cooperate intelligently in the training of the child, and to develop between educators and the general public such united efforts as will secure for every child the highest advantages in physical, mental, moral and spiritual education.

The parent-teacher association is the principal and best known expression of the home and school movement. Therefore, it is worth while to review the "whys" of the organization. It is necessary to forget the mediocre attempts of the past and to view the organization as a cooperative effort to unite the two great forces of education—the home and the school—in order that they may work successfully with the third major influence, the community.

Such a program should appeal to school administrators and teachers for the following reasons:

1. Improvement in school conditions is not possible until a strong public opinion demands it. No group can influence public opinion and public school officials so successfully as an enthusiastic and interested group of parents. Parents will not be enthusiastic and interested in school improvements unless they understand conditions and see clearly the possibilities for improvement. The best way to acquaint parents with school conditions and to arouse their interest in improvements is through a parent-teacher association which meets regularly to consider such matters.

2. An organization composed of both parents and teachers is much stronger and carries more in-

fluence than an organization composed exclusively of either parents or teachers.

3. Full and free discussion of general school problems in a joint meeting of parents and teachers often leads to an easy solution of troublesome problems.

4. Discipline usually becomes easy when a child realizes that his father, his mother and his teacher understand each other and are working together.

5. Acquaintance with the parents makes possible a more intelligent understanding of the children's needs and potentialities on the part of the teacher.

6. An intelligent understanding of the school program by parents usually helps to develop loyalty among the children and to make the teacher's efforts more fruitful.

7. Regular meetings held on fixed dates save time and energy.

8. Desirable reforms are more easily effected if parents are in sympathy with the school authorities. By coming to know teachers in a sympathetic way, parents can help greatly in disposing of unjust criticism of the schools by outsiders. The same thing applies to tales carried home by the children. Parents who "know" will set children right in their judgment of school work and management. This will make the teacher's task much easier.

## California Sales Tax Goes to Operate Schools

California has reorganized its system of taxation. The legislature at the session just closed adopted a sales tax and provided that approximately 50 per cent of the cost of operating the public elementary and secondary schools shall be paid by the state and the funds for such payment shall be derived from the proceeds of the sales tax in force throughout the state.

This is a plan which the teachers of California have officially approved. Regardless of the advantages or disadvantages of such a tax, the fact remains that the schools are now dependent upon this tax as a source of revenue, it is pointed out in a bulletin prepared by the board of education of Pasadena. It is equally true that without this or some other equally effective source of revenue the schools would face a serious crisis.

In a message directed to the city's school teachers the bulletin says: "Teachers should become intelligently informed upon this new tax system. We should distinguish between faults in the system and faults in its administration. We face the alternative of stabilizing this system or devising another to replace it. We should be aware that it is one of the few systems of taxation so far devised that spread the burden of taxation to all citizens. We should be alert to the real issues during these next few months when there are to be serious efforts made to force the repeal of this law and a second reorganization of the state's tax system. This is a fine subject for forum discussion and study."

# How the Various States Prescribe Textbooks on a Uniform Basis

By NELSON B. HENRY

Assistant Professor of Education  
University of Chicago

FOR more than half a century the question of suitable methods of providing textbooks for schools has been the subject of continuous controversy. The extensive use of textbooks as a means of instruction and the competitive basis on which textbook publishers have undertaken to meet the demands for schoolbooks have served to keep the question of textbook adoptions constantly in the foreground of discussions of educational procedure and educational legislation. Thus educators, publishers and legislators have wrangled over the question of textbook adoptions almost from the time the graded school system was established.

Every state prescribes some measure of legal control of the textbook enterprise in its relation to the common schools. While the specific measures adopted by the different states represent varying points of view and present a variegated pattern of control over a common factor in the educational program, it is significant that the authority of the state invariably has been invoked to define the procedure by which textbooks are to be selected for public school use. Twenty-five states at the present time have laws requiring the use of uniform series of textbooks, either in all schools of the state or in all schools of a specified type or grade. There is now, as there always has been, a serious and vigorous challenging of the merit and the propriety of such legislation.

It is a significant fact that in a dozen instances the question of the textbooks to be used in the public schools of the state was regarded as of sufficient importance to receive consideration in the text of the constitution.<sup>1</sup> These constitutional stipulations

*Since 1905 there have been few changes with respect to state textbook uniformity. This is not to say, however, that the prevailing plans represent a satisfactory adjustment of the problems in all states. There are urgent demands for changes in the laws in many state adoption areas. Twenty-five states now have legislation providing for state uniformity*

are not uniform. Four state constitutions, those of California, New Mexico, Oklahoma and Virginia, specify that uniform series of textbooks shall be used throughout the state, whereas Colorado, Utah and Wyoming specifically prohibit state authorities from prescribing uniform textbooks for all schools of the state. The Texas constitution requires that textbooks for public school children shall be furnished at the expense of the state. The constitutions of Illinois, Mississippi, South Dakota and West Virginia provide that school officials or teachers shall have no interest in the sale of textbooks for use in the schools with which they are identified.

In the case of California, the present constitutional provision for the statewide use of uniform series of textbooks was adopted in 1884 as an amendment to the new constitution of 1879, wherein the county was established as the unit of adoption of school textbooks. A law was passed in 1863 providing, except in incorporated cities, for the adoption of a state uniform series. Trouble began immediately and the popular dissatisfaction with state uniformity was so great that the new

<sup>1</sup>Lide, Edwin S., *Constitutional Basis of Public School Education*, Leaflet No. 40, U. S. Office of Education, 1931.

constitution of 1879 provided for the adoption of textbooks by county boards of education. Vigorous protests against this arrangement arose from the fact that when a family moved from one county to another it was necessary to provide the children with new sets of books. This popular clamor led to the adoption of a constitutional amendment in 1884 which provided not only for a uniform state series of textbooks but also for state printing of schoolbooks, the extreme example of centralized control of textbook management.

In several other states the question of uniformity of textbooks became the subject of legislation

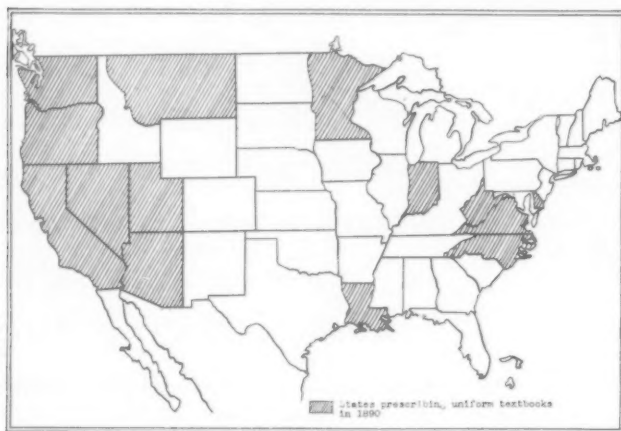


Fig. 1.

in this early period. The Georgia law of 1870 required the state board of education to prescribe the textbooks to be used in the common schools of the state. In the same year the general superintendent of free schools in West Virginia requested the legislature to change some of the texts that had previously been prescribed for the schools of that state. The South Carolina law providing for a uniform series of textbooks was enacted in 1871.

A Kansas law, apparently designed to secure uniformity, became effective about 1873 when the state superintendent announced the list of books he recommended for public school use. The Minnesota law, passed in 1877 and authorizing a contract for a state series of textbooks, was in effect until 1893. In the same year Nebraska granted authority to the state superintendent "to define the textbooks to be used in the several schools of the state." Delaware, Kentucky, Louisiana, Nevada, Oregon and Virginia enacted laws by 1878 or earlier giving state authorities more or less power to prescribe textbooks. Maryland is reported to have followed with a state uniformity law in 1885 but this was replaced by the county unit law of 1888.

In many instances these early laws did not effectively establish uniformity of textbooks throughout the state. The evidence is that in some cases

no serious effort was made by the state authorities to secure such uniformity. But the frequent occurrence of legislation implying a need for some measure of centralized control indicates a widespread interest in the problem of providing textbooks for use in the public schools.

The report of the United States commissioner of education for the school year 1888-89 indicates that by 1890 there were fourteen states in which textbooks were selected and prescribed for the schools on a statewide basis. These include Arizona, California, Delaware, Indiana, Louisiana, Minnesota, Montana, Nevada, North Carolina, Oregon, Utah, Virginia, Washington and West Virginia. The geographical distribution of these states is indicated in Fig. 1.

In two of the states in which uniform textbook laws were in effect in 1890 the books to be used were specified in the statutes. These states were Montana and West Virginia. The provision for state printing of textbooks in California required that textbooks be compiled under the direction of the state board of education. Delaware, Indiana, Louisiana, Nevada, North Carolina, Virginia and Washington provided that the selection of textbooks should be determined by the state board of education. In Oregon the law required the state board of education to submit its recommendations to the county superintendents who by a majority vote selected the series of textbooks to be used throughout the state.

#### *Confusion Exists on How to Deal With Problem*

The Minnesota uniformity law, passed in 1877 and still in force in 1890, undertook to regulate the price of books and to prevent too frequent changing of textbooks. This law required the commission to negotiate a contract with publishers "for and during the period of fifteen years from and after the time when the books to be furnished in pursuance of the provisions of the contract shall be first introduced into the public schools of this state." Although independent school districts were not compelled to adopt the books selected by the state textbook commission, it appears that a single list of books was prescribed by the textbook commission and that these were rather generally used throughout the state.

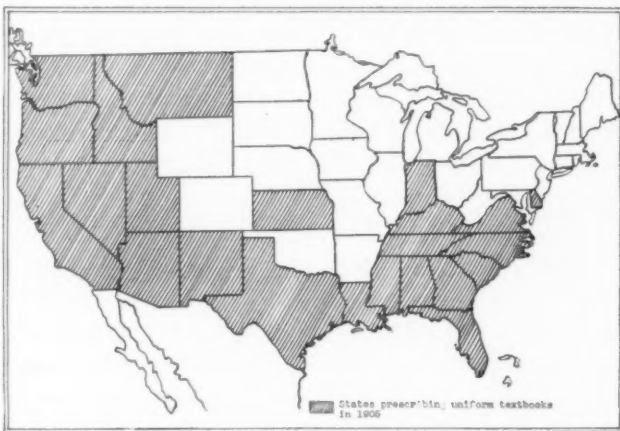
The Virginia school law of 1883 stipulated that "uniformity of textbooks . . . shall be provided for on some gradual system by the board of education." Up to 1890 the state board had construed the law as authorizing an open list of two or more series of books, leaving it for county boards to make a selection from these lists. In effect this provided for a system of county adoptions. In 1890 Supt. John E. Massey interpreted the law to mean that



it was the duty of the state board to prescribe one book list for use throughout schools of the state.

The requirements and intentions of the textbook laws in several other states indicate that there was no little confusion concerning the effective method of dealing with this problem. For example, an early Connecticut law authorized the state board of education to "direct what books shall be used in all its schools, but shall not direct any book to be changed oftener than once in five years." Under the provisions of this act the state prescribed a textbook in physiology and authorized its publication by the state board of education in 1886. Otherwise neither the legislature nor the state board of education has attempted to control the selection of textbooks for school use. Even the adopted text in physiology, although widely used in the schools of the state, was not exclusively used nor did the state board attempt to interfere with the use of other texts in this subject. In spite of the authority given the state board of education, the town boards in Connecticut have always exercised the privilege of choosing the textbooks for their schools.

In Florida for a number of years the selection of books was made by the county authorities without any effort on the part of the state to secure uniformity of texts or of procedure. The law of 1883 required county boards to meet on the first Monday in May and select books for use in the county schools. Under the influence of the state superin-

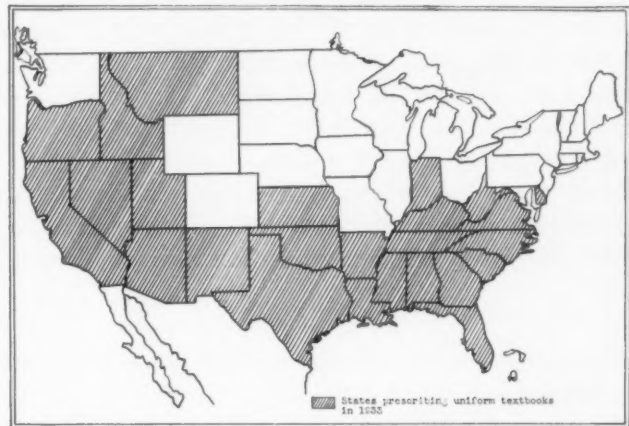


**Fig. 2.**

tendent all but seven counties in the state adopted the same series of books, giving practically the same result as a statewide adoption. The Arkansas law was apparently designed to secure the general use of a uniform series in the state. This law required the district school boards to adopt a series of textbooks selected from lists prepared by the state superintendent. The report of the state superintendent in 1890 notes that this plan failed to secure a satisfactory degree of uniformity even within the individual counties. He recommended

a plan, then in use in Kentucky and South Carolina, of county adoptions from a list of books to be recommended by the state superintendent or the state board of education.

Within the next fifteen years eleven new states introduced the plan of prescribing textbooks on a uniform basis, while two of the states which prescribed uniform school texts in 1890 were employ-



*Fig. 3.*

ing a different method in 1905. The distribution of the uniformity states in the latter year is shown in Fig. 2.

Seven of the states having state adoption laws in effect in 1905 had previously required some measure of uniformity by counties within the state. In three of these states, Florida, Georgia and Idaho, county boards of education were previously authorized to make textbook selections without restrictions. In Kansas there had been a local option law permitting county uniformity under popular referendum. Under the earlier laws of Kentucky and South Carolina, the county superintendent or the county board made a selection of books for use in the county from a multiple list provided by the state board of education.

In Mississippi the books for use in any given county had been selected by a committee of teachers in cooperation with the county superintendent. In Tennessee books were selected by the district school board with the advice of the county superintendent, who under the law of 1889 was charged with the responsibility of "securing uniformity in the course of study throughout the county when it can be done without increased expense to the parent." New Mexico established a territorial state board of education in 1891. As soon as this board was organized arrangements were made for the adoption of a uniform series of books.

Two of the eleven states in which uniform textbook lists were prescribed by law between 1890 and 1905 had no specific statute relating to textbooks in 1890. These states were Alabama and

Texas. In 1890 the state superintendent of Texas addressed an inquiry to the chief state school officer of each of the other states, asking for an opinion on the question of the best system of textbook regulation for a state school system. Several states strongly recommended state uniformity and as a result a state uniformity law was passed by the Texas legislature in 1897, effective in 1898.

Missouri, which does not appear in the state uniformity groups of 1890 and 1905, operated under a uniformity law from September, 1891, until 1905, when the legislature repealed all laws relating to the selection of textbooks. The attorney-general then ruled that county boards of education, by virtue of their duty to prescribe courses of study, had authority to prescribe the texts. The county adoption plan has prevailed since that time.

#### *Discontent Reigns in Minnesota Over Law*

Two of the states that appear with the state uniformity group in 1890 are not included in the list for 1905. These states are Minnesota and West Virginia. The uniformity law enacted by Minnesota in 1877 was never entirely satisfactory and probably was never rigidly enforced. The superintendent of schools of Jackson County, in his 1889 report, says he does not believe that "the people of this county will again submit to another monopoly of the textbooks by consenting to a state (uniform) system."

Further evidence of discontent in Minnesota at this period is furnished by the report of the superintendent of Brown County. "There is a movement going on amongst county superintendents and teachers in regard to our schoolbooks, with the intention of getting the present law concerning the state series abolished, the uniformity destroyed and the former method of robbing the people for the benefit of a few strangers reinstated." Under the leadership of the state superintendent, a free textbook law was enacted in 1893 in connection with which the attempt to employ a uniform list of texts was discontinued. Since that time the selection of textbooks for use in Minnesota schools has been left to the local school districts.

In West Virginia books were prescribed by act of the legislature from 1870 until 1897, when county schoolbook boards were established and given authority to make contracts with publishers for the books required by the county schools. Schoolbooks were therefore not prescribed on a basis of state uniformity in 1905, although this state later returned to the state adoption plan.

Since 1905 there have been few changes in the situation with respect to textbook uniformity in the several states. Comparing Figs. 2 and 3, it will be noted that only one state in which books were

prescribed on the uniform basis in 1905 is missing from the uniformity group of 1933. This is the state of Washington where a county uniformity law was enacted in 1909. On the other hand, Fig. 3 shows that three states are added to the uniformity group as it appeared in 1905, although one of these, West Virginia, appears in the state uniformity group of 1890, as shown in Fig. 1.

The three maps illustrating the progress of state adoption legislation clearly indicate that the plan has been much more favorably received in the Southern and Western states than elsewhere. Cubberley explains this tendency in terms of the general distrust of local control in the South and the sparsity of population in the West. The exceptional position of Delaware may be due to the fact that centralized control naturally encounters fewer obstacles in a small territorial unit.

It should be noted that the net increase of two in the number of states included in the state adoption group was effected within a briefer period of legislation than the twenty-eight years from 1905 to 1933. The Oklahoma constitution of 1907 imposed upon the legislature the duty of providing for a uniform system of textbooks for the common schools of the state. The next session of the legislature created a state textbook commission with authority to select the books to be used in all the schools. Arkansas, the last of the twenty-five states to provide for state uniformity of textbooks, changed from the county uniformity basis under a law enacted in 1917. Since this date there have been no new states added to the state adoption group. The total population represented by state adoptions is 50,417,099, while the so-called open territory includes a total of 72,357,967 persons.

#### *Prevailing Plans Not Entirely Satisfactory*

This is not to say that the prevailing plans of textbook adoption represent a satisfactory adjustment of the problems pertaining to the selection of schoolbooks in all states. There are evidences of profound discontent in many places. Not only are objections raised to the principle of uniform textbook series on a statewide basis, but bitter complaints and serious charges are continually being advanced against practices of both textbook commissions and publishers. There are urgent demands for changes in the textbook laws in many state adoption areas. On the other hand, the legislatures of states in which county or local adoption laws prevail are frequently asked to institute state adoption plans. Two such bills were presented to the Illinois legislature during the session that closed last June. Although failing of passage, they had strong support and were seriously argued in committee.



## The School Plant:

# How to Keep the Plumbing System in Repair at Small Cost

By FRED. W. FROSTIC, Superintendent of Schools, Wyandotte, Mich.

**S**ANITATION and health problems are extremely important in both community and private life. Changed ideals of the public and of the individual have resulted in a demand for the best type of sanitary and health facilities in schools. The modern school also has vastly changed its ideals regarding the personal cleanliness and health of the school child.

Still more noteworthy is the change in ideas of personal cleanliness in the mind of the child of today. He wants to keep clean. He dislikes insanitary conditions. He compares the facilities for keeping himself clean as they are provided in his home and in his school. The improvement in sanitary facilities in many homes has outrun the antiquated facilities in some older school buildings.

Until recently little regard was paid to the unusually heavy demand that is made on sanitary facilities in schools. Now, however, schools in progressive centers are equipped with the finest and most efficient type of facilities. Marble is commonly used for walls and toilet stalls. Floors are made of terrazzo or vitreous tile. Toilet bowls are of the wall hung type, and are equipped with hard rubber seats and efficient flush valves. Wash fountains are constructed so as to provide tempered water from a spray head, to replace the insanitary bowl used a few years ago. Drinking fountains are constructed so as to reduce to zero the contamination of the stream.

### *Repair Equipment Is Not Expensive*

The new sanitary facilities have greatly reduced plumbers' repair bills. They are designed to reduce the danger of stoppages to a minimum. These facilities, however, cannot be made fool-proof and the plumber must be called at frequent intervals unless there is adequate equipment in the school plant for taking care of emergencies quickly and effectively. Considerable savings may be effected and expensive repairs and replacements may often be avoided if such equipment is provided and if employees are given reasonable instruction in its effective use.

This equipment need not be expensive. An expenditure of approximately \$25 will equip most buildings adequately. One of the first and most important pieces of equipment to secure is a force pump. The barrel of the pump should not be less than 2 inches in diameter and it should be constructed of seamless brass tubing of at least 16-gauge. The handle and piston rod should be heavy enough to stand hard usage without bending. The rubber base should be from 4 to 5 inches in diameter, flexible enough to fit the openings in bowls closely and strong enough to withstand heavy pressure. Some forms may be turned inside out around the base for fitting into close apertures. A pump of this type is capable of exerting a pressure of 90 pounds and will force many kinds of obstructions out of the way. Pressure pumps of a more elaborate construction may be used to advantage at times, but due to the high pressure they exert and the consequent danger of breaking joints in the plumbing lines it is usually better to refer cases requiring high pressure to a master plumber.

### *Augers Are Indispensable in Repair Work*

Three sizes of flexible augers should be provided for removing masses of paper, cloth, cotton, soap bars, apples, rubber balls and other debris from the waste lines. These augers will work effectively and the maintenance department will find them indispensable. One of the augers should be 8 feet long, one 20 to 25 feet long and one 75 feet long. The shorter augers should be made of oil tempered spring steel and should be flexible enough to pass through traps, around the passages of toilet bowls and through the angles in the sewer pipes. These augers are equipped with a turning handle. Augers differ considerably in their flexibility and rigidity when they are placed in operating position. Some stretch easily and others become kinked, which reduces their effectiveness. The type of cutter that is attached to the end of the auger has an important bearing on its effectiveness. Selection of the proper type of lead to precede the auger is also important. Use of the improper type of lead will



hinder the task of inserting the auger into the drain line.

One of the best types of augers on the market is one constructed of flexible shafting similar in type to the shafting used to drive an automobile speedometer. The feeder is of the breast drill type. The lead ahead of the auger facilitates easy movement into the drain line. This type of auger removes waste material easily. As an example of its effectiveness, an auger of this type applied recently on a 3-inch drain line removed a 15-foot mass of hard material that had become packed into the line.

The 75-foot auger should be made of flat flexible steel, about 1 1/8 inches wide by 1/8-inch thick, and should be used on large jobs where long lengths of pipe are involved. This type of auger is especially serviceable when used to clean out lines entering the drain through the soil pipe stack, where the soil stack extends above the roof or through a soil plug opening in the basement. These augers are powerful and will remove almost any type of obstruction, such as roots of trees in drains. Where less power is needed a 50-foot auger of the same type, but made of 1/16-inch thick steel, will work effectively.

#### *The Best Types of Detergents*

In addition to mechanical devices, certain chemical cleaning compounds are useful in keeping the plumbing in a sanitary condition and also in keeping the drain lines open. There are many toilet bowl cleaning compounds on the market that are expensive and are no more effective than a good detergent that can be purchased for approximately \$0.06 a pound. A good detergent is harmless when used on toilet bowls, drinking fountains, urinals or lavatories. It is easy to use and is highly economical. Toilet bowls should be cleaned with a brush after the detergent has been dusted into the bowl and allowed to stand for a few minutes. A good cleaner and cleanser can be used for the same purpose, but it is higher in caustic content and if used with certain soaps may result in a high degree of saponification of the drain contents, thereby causing a jellylike substance to form in the lines. The best types of detergents contain about 7.75 per cent of caustic, and the best types of cleaner and cleanser contain about 46 per cent of caustic.

Drain solvents should be used cautiously. They will burn the human skin and will destroy rubber gaskets and packing in drain lines unless used properly. The solvent should be introduced into the bowl or drain in small quantities and flushed out after a minute or two with hot water.

Systems for dispensing liquid soap are often the cause of considerable maintenance. Soap tanks rust and corrode, the pipe lines become clogged and

the valves spring leaks. Much of this difficulty can be avoided by giving careful attention to two or three points in making installations. Metal soap tanks almost invariably cause trouble through corrosion. Porcelain or vitreous china tanks are the most resistant to soap reaction and will last longer than almost any other type. Perhaps one of the best tanks for the average school is a one-gallon glass bottle, inverted and fitted into a black iron or brass base in the same manner as a water cooler supply bottle. Employees can easily see the amount of soap in the container at any time. The cost of such a container is lower than the cost of a good metal tank, and the glass container will last indefinitely. One of the chief objections to the glass tank is that careless employees may try to handle it when the surface is wet with soap and may drop the container. A glass container with a neck and opening both top and bottom would solve this problem as the tank then could be filled from the top.

Pipe lines for dispensing soap should be made either of black iron or brass. Each right angle bend should be a tee fitting with a removable plug screwed into the outside arm. This simple precaution will make it possible to clear the pipe of obstructions by means of a wire inserted at the tee. The fittings should be securely anchored to the wall.

Individual soap dispensers are the most expensive to install and also to maintain. The dispensers work loose from the wall, the containers, particularly if made of glass, break easily and the cost of continuous service to keep the containers full is high. It is advisable in large buildings to connect large metal tanks or small black drums to a common large pipe line over each series of lavatories.

Soap valves have been greatly improved in recent years so that now it is possible to obtain rugged valves that will operate without repair for a number of years. A careful test should be made and the experience of users should be checked before this equipment is purchased.

### The School Bath

"Every public school should have connected with it shower baths, a swimming pool and a gymnasium, and all pupils should be required to undergo physical training not only in the gymnasium but in the swimming pool and shower baths as well, under careful medical supervision." This opinion is expressed by Dr. John Harvey Kellogg in an article on the importance of proper bathing, which appeared in *Good Health Magazine*.

"By this means," Doctor Kellogg continues, "the physical development of the young may be greatly encouraged, and evil moral tendencies combated. The universal introduction of these measures would certainly result, within a generation, in the production of a much more vigorous race of men and women than we now see."

## What of the N. E. A.?

*Dr. Erwin S. Selle points out reasons for the growth of the N. E. A., outlines some of the ways in which membership is secured, questions the importance of resolutions passed and proposes that its formal "planks" be limited*

NOT to reform the National Education Association but to provide a basis for understanding it; not necessarily to criticize its techniques but to illustrate techniques that may be employed in analyzing it and similar societies—these are the avowed aims of Dr. Erwin S. Selle as set forth in a recently published study of this national organization of teachers.<sup>1</sup>

Why has it grown so big? According to the author, there is not one answer but many—the use of war time promotion techniques and sentiments; the setting up of situations that generate rivalry between school and school, city and city; pressure from teachers' superiors and colleagues; direct and indirect suggesting and beguiling; the fact of increasing numbers, and the fact of service to members, many of whom get their money's worth.

Certain facts concerning the representative assembly are presented. It is pointed out, for example, that the composition of the assembly is somewhat affected by two rather prevalent practices, namely, choosing as delegates those whose expenses are paid out of public funds and choosing those whose vacation travels will take them to or near the convention city. The author comments that neither of these tendencies is relevant to the functions of delegates.

The executive secretary is said to have a dominant position in the organization. While Doctor Selle believes this to be proper, he thinks there

should be safeguards against the possible misuse of this power. Among these should be the provision of an open forum in the *Journal of the National Education Association* for the discussion of association policies. It is pointed out that no adverse comments are ever printed in the *Journal*.

Convention activities, including the general sessions as well as the meetings of the various groups of leaders, are analyzed in considerable detail. The addresses at the general sessions are classified under eleven categories—inspiration, interpretation, educational information and others—and in most instances part of an address is cited as an illustration of each classification. What, after all, is inspiration? According to the author, in the main it consists of "asserting a connection of the service of the teacher and the group with the maintenance of such values as religious devotion, patriotism, domestic virtue, character."

To illustrate, Doctor Selle quotes part of an address, from which a brief paragraph follows: ". . . The strength of our country rests not in our courts, not in our Congress, not yet in our president, powerful as these sometimes are; not in our armies or our navies. But the strength of a free government lies in the hands of the teachers who train the young and rising army for the duties and responsibilities in citizenship, and in their relation to their neighbors throughout the world. . . ."

### *Importance of Resolutions Is Questioned*

And what of the resolutions? In the eleven years covered by the study, 1918 to 1928, the association declared itself upon 123 different matters, general and specific. A glance at the long list reveals such items as "favoring improvement of rural education," "urging eradication of illiteracy," "disapproving removal of Pennsylvania state commissioner," "congratulating Mrs. Evangeline Lindbergh on the achievements of her son." The importance of these declarations is open to question.

"Although the resolutions are made to appear to be formal communications from the association as a whole to other social groups, in reality all that can be said about them with assurance is that they are communications from a few, sometimes a very few, persons who chance to be in a position to formulate them." Doctor Selle proposes that the formal "planks" be limited to the number that the association can promote actively.

<sup>1</sup>Selle, Erwin S., *The Organization and Activities of the National Education Association: A Case Study in Educational Sociology*. Contributions to Education, No. 513. Bureau of Publications, Teachers College, Columbia University, 1932.

# Editorials

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## Theory and Practice

FISCAL independence for public school districts and for higher public institutions of learning is again a leading question. Interest is apparently aligned as it was ten years ago. The majority of political scientists oppose fiscal independence of school districts and would mechanically classify public education with other municipal or local activity on practically the same base. The majority of school men oppose any change in status.

While the political scientists present almost a solid front against independence, a rift has been developing in the ranks of the school men. It appears that those who are questioning fiscal independence might also be grouped among the conservatives in educational thought. This fact, however, may be merely a coincidence.

Fiscal independence is assumed to be a state or condition in which any public activity within the total pattern has achieved independence of central popular legislative control and, under statute authority and safeguards, is permitted to levy taxes within the statute limitations. Fiscal independence might also be classified as the specific earmarking of portions of the tax income for the assurance of continuity in program for certain social activities.

So far as the theory of taxation is concerned, there is probably little argument against the contentions of the political scientists. In theory it is dubious practice to allocate, without constant and specific appraisal, any large portion of the tax income to any specific continuing activity. In theory, also, the multiplication of local taxing authorities may tend to extravagance and to overlapping and duplication. Fiscal independence of school districts or any other special authority is not tenable in pure theory.

There is little connection, however, between theory of public finance and practice of public finance. It is relatively easy to assume certain principles and to hold certain points of view, but to apply these principles and points of view to a position *in situ* is another matter. For the sake of securing a general premise from which to start, we may agree theoretically with the so-called tax experts and some members of the teaching profession. But we must differ with them in practice. So long as there exists a multiplicity of minor or local taxing units, there is little reason to single out public

education and say, "eliminate fiscal independence." Until all local taxing units are eliminated and the state and federal governments become the only sources of revenue raising, let us cling tenaciously to our present degree of fiscal independence and strive to make it even more complete.

There is no panacea in centralization that has been proved in practice, and the assumptions of certain mechanistic theorists to this effect are open to grave questioning. Possibly their reasoning has been somewhat clouded by the very absence of a consistent philosophy and a mistaken worship of business and of size. From all of the arguments advanced to date, there is none that convinces us either of the logic, the practicability or the desirability of change.

On the other hand, the degree of fiscal independence held by the schools from early to present times is part of the American tradition. It has kept the schools relatively free from partisan political entanglements. Fiscal independence with separate legislative control has been one of the factors that permitted public education to develop to its present position. Evidence from several national surveys is easily available and indicates a condition opposite from that argued by some of our tax experts. Independent school districts have not spent the most money, although in general they have probably met their needs most effectively. There is no evidence in practice to indicate that it is necessary or desirable to give up our one practical means of maintaining our freedom and integrity for any statistical or laboratory arguments.

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## The Teachers' Institute

THE traditional teachers' institute has little excuse for continuing to exist. It is supported by funds legally taken from teachers as a fee at the time they contract for work.

Institutes furnish many itinerant and professional lecturers a fair field for the exercise of histrionic arts. They offer county commissioners in many states opportunity to reward their friends in a small way by declaring them institute conductors or lecturers. Superintendents and college professors pick up small rewards by appearing on these programs.

The institute is a relic of pioneer days. It should be abolished in its present form and its mandatory financial support by teachers should be abandoned. If legal continuity is desired, the traditional institute might easily be transposed into the professional gatherings conducted by state associations. The profession appears to be a thoroughly responsible heir.



## An Emergency Measure

**R**ECENT suggestions to the effect that local school districts be empowered to borrow upon their delinquent taxes as a means of overcoming deficits in current expense have much merit and should be given thoughtful consideration by local authorities.

Much of the fiscal distress encountered by school districts is due not only to decreased appropriations but also to the inability to collect, for a variety of reasons, all of the levied taxes. Relief through federal loans against which these delinquencies are pledged would be most helpful at the present time. These loans would supply money to pay better salaries in many instances and the balances could be used for essential complementary services that have been seriously neglected. Portions of such funds might well be invested in new textbooks, laboratory equipment and educational supplies to improve classroom instruction.

The interest on delinquent taxes will more than cover the interest on the loan. One of the outstanding advantages of the plan is that the local district could better its present curtailed program without going into debt.

## Quaint Practice

**A**NEW difficulty has arisen to perplex school executives. Unprincipled administrators are attempting to replace men and women now holding principalships and superintendencies. Their technique is rather quaint in some respects and indicates that at some time they have heard of professional ethics and wish to be on the safe side.

One consistently upheld principle is that no school man shall compete against another colleague working on a particular job by applying for the position until it has definitely been declared open. Current offenders attempt to overcome this difficulty by writing in October to boards of education as follows: "If you are contemplating a change in your superintendent or your high school principal next year I shall be glad to be considered. Under present circumstances I shall be glad to accept a reasonable salary, probably somewhat less than you are now paying. However, I cannot become officially a candidate until the position is vacant." While the individual letters differ somewhat, this summation represents the general tenor of half a dozen such letters sent to us by superintendents and board members.

This practice is indefensible and should not be tolerated. If the profession were organized as a

true guild these individuals would be quickly read out of the teaching group and their names would be posted throughout the country. Even now proper publicity through the educational press might be the best solution of the problem.

## The Attendance Drive

**I**T IS difficult to visit a small town or city school system in November, December or January without being confronted by an attendance drive.

While these drives differ in detail with locality, they all bear the same general characteristics. Teams are organized within schools by the home room or whatever the primary unit of pupil administration happens to be. These teams compete with each other for the best "room unit" attendance. Gold star rewards are given for "worthy attendance."

Rooms within the building also compete for the best attendance in the school and, if the traditional attendance officer is in charge, one school competes with another for a district banner or a plated cup. The inevitable graph is drawn for each unit, for each school and for each district so that the entire procedure has a surface modernity. Attendance officers speak of the drive as a "scientific attempt."

The motive is to win and the means are individual and group competition. The results of such drives in increasing attendance are later written up by principal or attendance officer and presented at some sectional or state professional meeting and the fever spreads.

Has this activity a real value or is it merely a mechanical device that operates without respect for problems or conditions? All contests have definite weaknesses. The attendance contest is probably worse in most respects than the typical "busy" activity since it tends to negate everything the school may be trying to do in health education. There was a time when perfect attendance might have been considered a virtue but that time is past. We are now fully aware from results of fragmentary studies that absence is not due to original sin and general depravity; it is due in the great majority of instances to health, economic and social reasons. Truancy or willful absence plays little part.

The greatest factor in nonattendance is the common cold. The beginning of the fall series of colds generally coincides with these attendance drives. Competitive drives with their stars, flags, banners and cups, their accompanying ballyhoo and teacher reward, produce a set that tends to

overlook all intelligent considerations. The pressure is on attendance. Sooner or later everything except attendance is lost sight of. Competition among individual children forces them to be in school. Group pressure for room scores makes further demands. Interschool competition adds another pressure. The terminal result is that many children come to school when they should be at home in temporary isolation. Much incipient and serious infection finds its way into the classroom that might be avoided if the teacher did not have the specter of attendance competition behind her constantly.

It seems almost time for the profession to grow up and stop solving serious problems by the adolescent means of competitive contests, the results of which tend to discount and destroy valuable teaching in other curricular divisions. Superintendents and principals should do something about attendance officers who have a statistical bent and a childish passion for solving attendance problems. No intelligent head of a school health education division would countenance heavy emphasis on technical attendance at the time of year when there is greatest health risk to the child. After all it is the progressive development of the child and not the percentage of attendance in which we are interested.

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### Silly Paternalism

THE paternalistic movement in education appears to be attaining new heights and new absurdities. Many persons are familiar with the type of student control and surveillance existing in public institutions of secondary and higher education. Much of this structure appears to be built around the assumption that continued individual immaturity is desirable. They just won't let the boys and girls grow up or give them a chance to make decisions for themselves.

It seems perfectly natural that many of these silly notions should gradually be adopted by boards of education and teachers will be restricted in their normal conduct. A national news agency reports a rule passed by the board of education in a small New York community providing that "in order that they may be in the best condition for the instruction and training of pupils all teachers and janitors shall retire at ten o'clock except on nights when school is not in session."

Against this and similar absurdities it is fondly hoped that public school teachers and administrators will revolt. Full publicity given to paternalistic tendencies will be helpful in laughing them out of the rule books.

### Too Many Candidates

CASUAL study of routine reports of certain college and university appointment bureaus indicates that the procedure followed is not particularly helpful in the maintenance of healthy professional conditions.

When an institution sends out eight candidates for one position and, in certain instances, as many as fifteen, it is only human for the average board of education to find out how little the candidates will work rather than to offer what the district is able to pay.

The present dislocation between the supply of and the demand for teachers is sufficiently serious and is affecting salaries regardless of depression. It does not speak well for administrative intelligence when institutional supply bureaus further these conditions by supplying so many candidates that it is almost a foregone conclusion either that the candidates will bid for the job or that the boards will take advantage of conditions.

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### An Economic Survey

THE peculiar fallacy that money spent in taxes is poured down a deep hole in some unknown spot and that community returns are relatively small has been preached by certain industrialists for so many years that it is little wonder the people are beginning to believe that this is true.

The time is more than ripe for the presentation of a more accurate picture, particularly with respect to public education. Such a presentation may be promoted advantageously by professional organizations. An economic survey is one of the means through which actual facts may be exhibited. Actual predepression receipts and expenditures and current depression salaries and outgo might be studied in a communitywide survey. Annual expenses might be studied by type, purpose and place of expenditure. Time elapsing between receipt of money or credit from a community and the return of these funds to the community in stimulating economic productivity might be analyzed. Presentation of such facts to citizens should help offset false impressions they may have gained.

It is easily possible by means of a careful and exacting study to establish firmly the value of the profession in its economic relationship to the community. Actual facts disclosed by such an investigation will probably be illuminating. They may even be valuably informative to many groups that have been instrumental in reducing appropriations.

## Happy to Say—By WILLIAM McANDREW

THE happiest people I have known are those who have taken poor schools and made them hum with success. It's bad for you to find things to be too easy. In the tropics you can pick bread from a tree and take it with milk from a coconut, without doing any work. You stagnate there. Pray for trouble; go out and look for it. It gives you fiber.

ONE of the things you notice in good executives is that they do not waste hundred-dollar time on dollar tasks. A planning teacher parcels out many routine jobs to children and has the work done gladly with honest pride. It is training in responsibility. Lord knows this generation needs it.

I HAVE known several school men, including myself, who have set out manfully to plan their time, only to find daily discouragement throwing them off the track. To fail to make mastery of our days a habit is a tragic calamity. To be busy and bothered over secondaries is not an uncommon school man state. Select fewer and bigger obligations. Begin your morning memoranda: "I shall do these." The main thing is to become a habitual success.

IT IS good management to praise abundantly, but it must be with a clear statement of facts. The mere jollier becomes a joke to his staff. You don't need to make a Narcissus of anyone. Charley Prior in Fairhaven, Mass., and John Chewning in Evansville, Ind., have developed school bulletins that make even statistics serve as praise.

TO ABANDON a plan is mental suicide unless one leaves it for what, by careful consideration, is found to be a better one. A grasshopper is no fit model for an educator. To go on without a plan of life is not to go on at all. It is as though you were content not to grow up. To think that at thirty or fifty or seventy you may be free from making plans and of strenuously following them is equivalent to lying down in the cemetery and calling for the shovelers.

YOU have occasional moments when a large purpose comes galloping through your mind. Your whole self is enlivened. Capture these steeds

and make them carry you. Put 'em through their paces every morning.

CLEVER people who wish to be known as the Smart Set sneer at ideals. If you are sensitive to sneers don't speak of ideals. Call them "principles."

IONCE worked in the railroad offices of Jim Hill, the Empire Builder. One thing he said lingers in my mind: If you want to know whether you will be a success or not the test is simple and sure: Are you saving money? If not, the seeds of success are not in you. God bless the Scotch. This reminds me that the great Gibbon of "The Decline and Fall" wrote: he is rich who keeps his outgo under the minimum of his income.

NEGLECT or abuse that loses a good friend does greater damage than that which brings the loss of a tooth. There are no dentists restoring lost friendships and, besides, false friends rank much lower than false teeth.

ALL sleep has something of the effect of death, such as quiet, forgetfulness and so on. But every morning you are born again. Every day is your birthday. Celebrate.

STRIVING to be known for individuality may be not acting yourself but trying to be what nobody is, and what no sensible person wants to be. A wish to be thought an original person needn't prevent you from imitating the good methods you see elsewhere. The most original composers have saturated themselves with the best music of others. The most valuable originality doesn't come from a desire to be different.

A WAY to prevent a troublesome little self-advertising brat from becoming the master of a classroom is to make him a responsible servant of it. But, for the land's sake, don't vote for a mayor on this principle.

IF CHILDREN are sent to a doctor he doesn't waste time putting blame on them or their parents. The modern teacher knows that the defects of learning can be diagnosed and cured. Acting accordingly, the teacher makes a job into a profession.



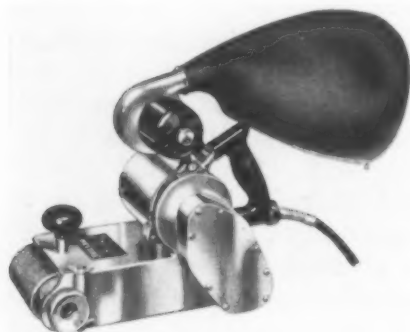
# Your School— Its Construction and Equipment

A Department Conducted by CHESTER HART, B.Arch., Chicago

## A Sanding Machine With a Dust Collector

A portable sanding machine equipped with a vacuum dust collector is a new piece of equipment that is applicable to school maintenance work. It may be used for resurfacing desks, benches, floors and woodwork generally, to refinish blackboards, or grind and polish stone or metal. If so desired, the sander may be attached to a bench stand in the manual training department and used as part of the shop equipment during the school term. It may then be detached during the summer months and used for maintenance work.

The Skilsaw Sander, made by Skilsaw, Inc., 3310 Elston Avenue, Chicago, eliminates sanding dust from the air and permits cleaning and painting to



*Dust is collected in the removable zipper bag attached to the sanding machine, which eliminates sanding dust from the air.*

be performed at the same time as sanding. The dust collector consists of a high speed vacuum fan mounted on the sander, with the intake opening immediately behind the sanding belt. The collected dust particles are deposited in a removable zipper bag. The individual motor on the dust collector prevents slowing down of the sanding motor, thereby maintaining sanding efficiency. The new dust collector unit can be attached to old sanding machines.

The Skilsaw Sander used with the dust collector has an aluminum die cast frame, and a  $\frac{5}{8}$  h. p., universal A.C. or D.C., 25-60 cycle motor. The belt size is  $4\frac{1}{2}$  inches wide by  $25\frac{13}{16}$  inches long, which presents a sanding surface of 32 square inches. The belt has a speed of 1,900 feet a minute and is

under a constant tension maintained by coil springs. The belt can be removed by turning a hand wheel which releases the spring tension. The sanding belt runs flush with the right side of the machine for working close to upright objects parallel to the belt, and a noser attachment allows the same close work when uprights are parallel to the roller. The manufacturer announces that this machine leaves no ripples or ridges on the finished surface.

## Time Element Incorporated in Temperature Control

Temperature control within a fraction of a degree has been accomplished by the Thermochron, made by the Minneapolis-Honeywell Regulator Co., Minneapolis. The elements of both time and temperature have been incorporated in this control unit, with the result that the lag between heat requirement and heat supply has been overcome.

The burner is started in advance of thermostatic demand in order that heat will arrive in the room at the instant it is needed. Similarly, advantage has been taken of accumulated heat and the burner is turned off before the desired room temperature is actually attained. In this way both undersupply and oversupply of heat are eliminated and air stratification does not occur.

The Thermochron is similar in appearance to the T-12 clock thermostat, but the assembly is changed to permit the new dual control. The coil and blade assembly is controlled by a synchronous motor and a cam that causes the blade to move toward and away from the contacts in regular thirty-minute cycles. In this manner room temperature is automatically checked at periodic intervals for small temperature variations and is guarded constantly by the sensitive thermal element. The timing mechanism alone will not cause heat to be supplied, but one-quarter degree of heat loss registered in the thermal element at the end of the thirty-minute period is sufficient to operate the burner to supply this loss.

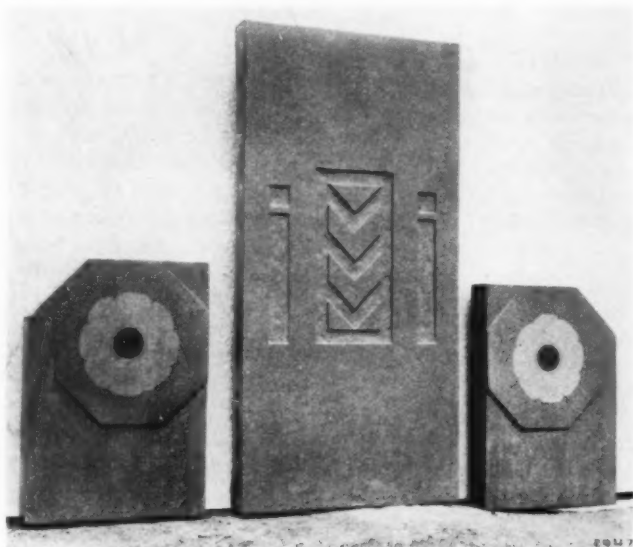
If there is no heat loss the burner will remain inoperative until another time cycle has passed, unless there is a radical temperature change. With a two-degree heat loss at any time the thermal element alone will keep the burner operating until the temperature is again in the control range, and then both the time cam and the thermal element will resume cooperative command.

The electric clock requires a regulated frequency of a 60-cycle, 110 or 220-volt circuit. It is self-starting and automatically lowers the temperature at night and raises it in the morning. It is available with a week-end shut-off, an adjustable holiday shut-off and a locking device to prevent tampering, all of which are desirable for school installations.

## Nature's Process Used to Produce Synthetic Stone

A manufactured stone that is produced in a way similar to nature's process, but with the time element greatly accelerated has resulted from the research conducted by David E. Ross, R. L. Harrison and a group of Indiana chemical engineers.

"Rostone" is made by mixing finely pulverized shale with alkaline earths, both in a slightly moist state. At the same time quarry waste filler and coloring matter are introduced. The material is then



*These are some of the decorations that may be achieved with Rostone.*

molded under hydraulic pressure, and finally cooked in a steam chamber for two hours. The shale and earths combine chemically into a new stone-like substance.

The resultant material is a hard, close grained stone of smooth texture which is free from lami-

nations. As normally produced, the stone will exhibit a crushing strength of 8,000 pounds per square inch, and tests as high as 22,000 pounds have been attained. Its moisture absorption is approximately 8 per cent, and this can be controlled within the limits of 5 to 12 per cent. Tests for hardness, resistance to abrasion, toughness, freezing, thawing and fire resistance are all satisfactory, according to the manufacturers.

Rostone may be produced in slabs and molded shapes, and in a variety of colors, either plain or variegated. Polished or textured surfaces may also be obtained. Two color effects are possible by sand-blasting or carving. One color on the upper surface of the stone is cut away to reveal another color which forms the remaining body of the stone. The stone may also be molded to reproduce finely detailed ornament. Large slabs and structural shapes may be produced with precision, and this accuracy of dimension may be used to advantage in simplifying building erection. The possibilities of molding into the stone various keys and locking devices for fastening the stone to the building structure has led to the development of new methods of construction that reduce building costs. Remodeling existing buildings is also facilitated by these easier methods of application. Some of these structural possibilities are shown in a modern house at A Century of Progress Exposition.

Rostone may be used wherever natural stone is ordinarily placed in a building, such as exterior walls, interior walls, floors, stairs, roof terraces, copings and fireplaces. It may be used as a thin revetment to form a wainscot or as a structural element in a bearing wall. Rostone may be used and handled as if it were natural stone.

## A Protective Paste for Laboratory Table Tops

A special paste designed to protect laboratory table tops is being manufactured by the Kewaunee Manufacturing Co., Kewaunee, Wis. Labtop Seal prolongs the life of laboratory furniture because the smooth, clean, polished surface finish is acid and alkali resistant, and waterproof. It is applied with a woolen cloth. An application about every thirty days will form a protective coating on the laboratory desk tops that will minimize refinishing and replacement. The paste is made in the same color as laboratory tops, it does not peel or flake and is not sticky or gummy after application. Application is a quick, simple process, and the protection obtained results in a decided saving in equipment replacement.

## NEWS OF THE MONTH

### Effect of Public Works Program on School Building Projects Told by U.S. Agent

The National Council on Schoolhouse Construction, at its annual meeting held in Milwaukee, September 18 to 20, passed resolutions asking certain questions in regard to the effect of the federal public works program on school building projects. George F. Zook, U. S. commissioner of education, presented the questions to Col. H. M. Waite for consideration. The questions and Colonel Waite's answers follow:

**Question:** Must applications for school building projects be submitted by January 1, 1934?

**Answer:** The resolution of the special board limiting allotments to those projects before it, prior to January 1, was not intended to exclude other projects, but to expedite submission. If the Public Works Administration fund is not exhausted by such allotments, the projects of a later date will be considered.

**Question:** May the leasing feature be used on a successive one-year lease basis in states where long term leasing is prohibited by state regulations?

**Answer:** If long term leasing is prohibited by state law, the P. W. A. will not evade such law by making one-year leases renewable at expiration.

#### *Thirty-Year Lease Not Required*

**Question:** May the leasing feature be used on a short term rather than a thirty-year basis, provided the short term lease provides for amortization or construction cost less the federal grant?

**Answer:** There is no requirement that the lease be for thirty years. In fact, the shorter the term the better. The thirty-year basis is the maximum term.

**Question:** Will successive one-year leases be permitted provided responsible groups of local citizens will underwrite and guarantee complete amortization of construction cost less the federal grant?

**Answer:** The objection to one-year leases with renewals, is that such arrangements are evasions of state statutes in states where long term leases are not lawful. Hence the guarantees of citizens will not cure the objection to the defect.

**Question:** Does the P. W. A. propose to set aside specific allowances for the various states?

**Answer:** The P. W. A. will not make specific allotments to states.

**Question:** Will the P. W. A. allow a 30 per cent grant on a school building project when the 70 per cent is being obtained through legal local loans or current taxation?

**Answer:** The P. W. A. will purchase the bonds of a political subdivision, issued to obtain funds for the construction of school buildings and will allow the grant in such cases, provided the United States is reasonably secured, that is, that the legislation back of the bonds is pursuant to local law and that the political subdivision will be able to retire the bonds.

#### *The Effect of Delinquent Taxes*

**Question:** Will districts in good financial condition be barred from the P. W. A. grants and loans because they have already reached their legal bonding limitations?

**Answer:** Only those bonds will be purchased which are enforceable obligations. Bonds issued in excess of legal limitations are not enforceable obligations.

**Question:** Will grants and loans be denied because of delinquent taxes?

**Answer:** Grants and loans will not be denied because taxes are now delinquent.

**Question:** Will unencumbered delinquent taxes be accepted as collateral for federal loans?

**Answer:** The act requires that the United States be reasonably secured. If taxes are delinquent to such an extent that it is obvious the political subdivision will not be able to retire them, then the United States is not reasonably secured.

**Question:** Is the cost of a project considered to be the cost to the contractor or the cost to the owner? Are fees for professional services to be included in the total cost of a project when determining the 30 per cent federal grant?

**Answer:** Fees for professional services are not labor, within the meaning of Section 203a (2). The purpose of

the remainder of this question is not understood. If you will indicate what P. W. A. circulars used the words "cost of a project," I will be able to answer this question.

**Question:** When 30 per cent grants and 70 per cent loans are allowed for new construction, may equipment be included?

**Answer:** The cost of equipment of new buildings may be included in the amount of the loan requested.

**Question:** May equipment for existing school buildings be financed by 30 per cent grants and 70 per cent loans?

**Answer:** As the Act, Section 202, makes projects for the improvement of public buildings includable, projects solely for the equipment of existing school buildings may be financed by the administrator. However, it is not the policy of the administrator to finance the purchase of equipment not connected with construction. The purpose of the Act is to promote employment. This purpose will not be accomplished by mere purchase of equipment already fabricated. If the project requires the construction of equipment, then it is within the policy of the administrator.

#### *Grants for Repair Work*

**Question:** Inasmuch as many school buildings are in a poor state of repair because there has been a decrease on repair of school buildings ranging from 50 to 100 per cent during the past three years, and in view of the fact that repair work will offer immediate employment without the delays incident to the drawing up of contracts, etc., will the P. W. A. allow a grant amounting to 30 per cent of the total cost of school building repair programs?

**Answer:** The P. W. A. will allow a grant amounting to 30 per cent of the cost of labor and material employed on a project for school repairs.

**Question:** May extensive repairs, alterations, improvements be encouraged by allowing a 30 per cent grant and permitting the school districts to spread their 70 per cent of the repair expense over a five-year period through loans by the P. W. A.?

**Answer:** A loan to a school district may provide that it shall be amortized over a five-year or longer period, not to exceed the life of the improvement.



# We Have Tossed Tradition Out the Window

## with this

# NEW, REVOLUTIONARY CHINA

**B**ACK in the dark ages potters angled for public favor with pigments—patterns they hoped would please. And right down the years, potters have continued to think in terms of patterns. There has been no real change in the modeling of china for literally centuries.

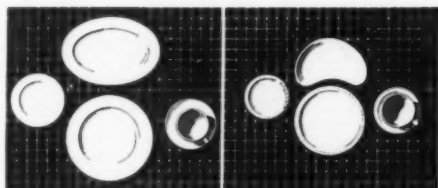
Our homes have changed, our clothes and our cars—but china has clung to traditional modeling—until NOW. For now, backward thinking is over. We have dared to look ahead.

This is our first public announcement of a new china that will stand forth as a blazing challenge to all makers of china, and users as well. Its name is ECONO-RIM, and here's how it got that name—a name to remember.

How  Saves Valu-

### able Space on Table and Tray

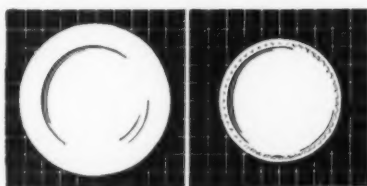
The diagrams below show at a glance the almost unbelievable space economies possible thru the use of Econo-Rim. Not only will Econo-Rim cut down the necessary tray or table area as much as 34%.



Left: A typical luncheon service using a 10" plate.

Right: The same luncheon served on Econo-Rim. Luncheon A occupies an area of 456 square inches. B on Econo-Rim occupies an area of 294 square inches. The saving in space is 34%. And the actual, usable food area of both table set-ups is approximately the same.

But in doing so, it actually adds in some cases as much as 58% to the usable food area of an individual plate in comparing that plate with an old style plate of the same over-all diameter. The diagrams below, drawn from actual measurements prove this beyond a doubt.



Left: A conventional 10" plate. Area actually occupied by food—42.8 square inches.

Right: Econo-Rim measures 8-3/16 over all. But provides actual usable area for food of 41 square inches. Or a saving in space over the 10" plate of 36.5%.

How  Will Affect  
PATENTS PENDING  
Food Profits

Every figure we have quoted was taken from an engineer's yardstick—they are indisputable facts. Remember what we said at the start about modeling having stayed the same for centuries. Over-all dimensions always the same. And particularly the rims.

We started with rims. First, why have rims? Secondly, did they have to be any set size? Rims serve two purposes. Something to take hold of. And a place for the pattern. Potters have stopped right there—the rim was a place for the pattern. Nobody seemed to realize that the rim could be made beautiful without an elaborate decoration. We cut down the rim. Introduced the pattern into the center of the plate. And by simple embossing, with just enough color to set it off, we discovered we had the most distinguished service imaginable.

Now to translate those savings into terms of actual profits to you who will buy this new china.

### In Restaurants and Tea Rooms

If this is your business you are obliged, if successful, to constantly wrestle with the problem of additional space. You have, for example, a growing demand for "deuces." And all your tables now are probably overcrowded. What to do about it? Econo-Rim is the solution. Bring in your smaller tables. Serve the same food on just about HALF the table area now required. Get away from the present cluttered effect. And encourage larger orders because there is now plenty of room. That's what Econo-Rim does for you—and it's an easy matter to see how that will affect your profits.



### Counter Service, Bars, Etc.

Again, Econo-Rim fills here a long-felt need. Sandwiches stay on the plate. Don't spread over the edge. And the busier the counter—the more Econo-Rim's space-saving features are appreciated. Every customer is treated as an individual—with his own food in front of him where it belongs.

### Cafeterias

Econo-Rim is "made-to-order" for cafeteria use. Every tray holds more dishes. Keeps the customer adding to his order, because no tray ever looks full. Less chance for mishaps in carrying, too. Each individual plate is easier to handle—this is true in the case of customers as well as the help.



### In Hospitals

Is there ever enough room on any patient's tray? There will be with Econo-Rim service. For balky appetites there is nothing quite so bad as a tray that looks overloaded. And nothing quite so sure to rouse the appetite as a tray that looks like "just enough and no more." We expect a lot of hospital orders, for Econo-Rim is what they have been looking for. Up to now they have never had it.

### Why You Should Buy

SYRACUSE CHINA  
 Now  
PATENTS PENDING

1. Econo-Rim brings to any user an actual dollar-and-cents profit that can be quickly and accurately measured. 2. Econo-Rim will please every customer—will actually increase the size of the order. 3. Econo-Rim is easier to handle than any present china. Its breakage will be less. Its replacement cost lower in proportion.

Send TODAY for a descriptive folder which will explain more fully just exactly how Econo-Rim will fit into your own business—how it will save space—add to the size of a customer's order—MAKE YOU A HANDSOME AND IMMEDIATE PROFIT. The coupon below brings the folder to you—Free.

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ONONDAGA POTTERY CO.,  
SYRACUSE, NEW YORK.

Send me your folder on Econo-Rim.  
It sounds most interesting.

Name .....

Address .....

## NEWS OF THE MONTH

### Pennsylvania Holds Education Congress

The annual Pennsylvania Education Congress was held at Harrisburg, November 8 and 9. "Schools of Tomorrow" was the general theme of the meeting, which was the state's major contribution to national observance of American Education Week.

Dr. George F. Zook, U. S. commissioner of education; Jessie Gray, president, National Education Association; Dean William F. Russell, Teachers College, Columbia University; Prof. John K. Norton, chairman, Joint Commission on the Emergency in Education, and J. W. Crabtree, executive secretary, National Education Association, were among the prominent educators who appeared on the program.

Commissioner Zook spoke on federal and state relationships in the emergency, and Professor Norton discussed the report of the national conference on the financing of education.

A feature of the program was a series of eight short talks on "What May Be Expected of the Schools of Tomorrow," given by various individuals representing the pupil, the parent, the teacher, the profession, the state teachers' college, the college, the university and the public.

### Plans Made for Child Health Recovery Campaign

Plans for a nationwide campaign to restore the health of the nation's undernourished children were made at the Child Health Recovery Conference, called by the secretary of labor, Frances Perkins, and held in Washington, D. C., on October 6, according to the *U. S. News*. Mrs. Franklin D. Roosevelt and Harry L. Hopkins, federal relief administrator addressed the meeting.

On the basis of data collected by the Children's Bureau during the last two years it is estimated that approximately one-fifth of the preschool and school children in the United States are undernourished.

An effort is to be made to find as many of these malnourished children as possible and supply relief needs for their care. Much of the discussion at the meeting centered on the comple-

tion of arrangements for this nationwide drive.

Mr. Hopkins stated that six million children in the United States are getting public relief. How many more are getting relief from private sources he said he did not know.

### Teachers of Science Will Meet December 29

The program has been completed for the meeting of the committee on the place of science in education of the American Association for the Advancement of Science. The meeting will be held at Massachusetts Institute of Technology, Cambridge, Mass., on December 29.

E. S. Osbourn, John Burroughs School, St. Louis, will preside at the morning session. "Reports of Experiments in Teaching Scientific Method" is one of the subjects that will be presented at this session. Wilhelm Segerblom, Phillips Exeter Academy, Exeter, N. H., will speak on "The Science

Teacher's Scholarship and Professional Training."

"Experiments With High School Science Clubs" will be the subject of an address by Morris Meister, Haaren High School, New York City. S. W. Bilsing, A. and M. College of Texas, College Station, Tex., will discuss "Science Clubs in Relation to State Academies of Science."

Jerome Isenbarger, Chicago, will preside at the luncheon session. John C. Merriman, president, Carnegie Institution of Washington, Washington, D. C., will speak on "Some Reactions of Science Upon Those Who Study It."

H. A. Carpenter, Rochester, N. Y., will preside at the afternoon session. "The Work of the Central Association of Science and Mathematics Teachers" will be discussed by W. F. Roecker, Boys' Technical High School, Milwaukee. "Types of Useful Organizations of Science Teachers" is the subject of a paper to be read by W. L. Eikenberry, State Teachers College, Trenton, New Jersey.

### Evening Forums to Discuss Civic, Economic and Social Questions Being Held in Tulsa

A series of public forums devoted to civic, economic and social questions is being conducted in Tulsa, Okla., in connection with the Tulsa public evening schools.

The first forum was held on October 2, and the last of the first semester series will take place on December 18. Twelve forums will be held during the first semester. During the second semester, according to Merle Prunty, superintendent of schools, a series of six lectures of the same general character will be offered in the seven junior high schools in the city, so that, all told, more than fifty public meetings will be held during the year.

In presenting the programs, the various state educational institutions have exhibited ready cooperation in granting, without charge, the services of the members of their sociology and economic faculties. Likewise, the members of the social studies staff of the Tulsa public schools have entered graciously into the presentation of a

portion of the program. The lectures are free. Members of the audience are urged to enter the discussions.

The lectures and speakers for the balance of the first semester are as follows: "The Agriculture Debt Problem," Dr. J. T. Sanders, Oklahoma A. & M. College, Stillwater; "Capitalism and Frontiers," Maude Wendt, Central High School, Tulsa; "What's Happening in the World Today? Asia," Nelle Bowman, Central High School; "The Next Step in Government—The International Unit," Lucy Hampton, Central State Teachers College, Edmond, Okla., and "Can We Have a Fair System of Taxation?" D. E. Temple, Central High School.

A pamphlet entitled "Your Tomorrow" has been distributed by the Tulsa board of education. This contains the subject, date and outline of each lecture and a brief introduction to the lecturers. The first semester lectures are held on Monday evening in the auditorium of the Central High School.

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## NEWS OF THE MONTH

### Section Q Will Meet on December 29 and 30

Section Q (Education) of the American Association for the Advancement of Science will meet on December 29 and 30. The various programs will be held in Emerson Hall, Harvard University. The Statler Hotel, Boston, has been designated as headquarters for the Section.

Arrangements have been made for four sectional programs, and a joint dinner with Section I. The central theme of the Friday morning program will be "Studies of the Components of Mental Ability." Dr. E. L. Thorndike, Truman Kelley and Edwin B. Wilson are among those who will participate.

The central theme of the Saturday morning program will be "Problems Relating to the Measurement of Individual Development." The speakers will include W. F. Dearborn, Psyche Cattell, J. R. Hobson, J. M. Ratcliff, E. D. West and Harold C. Stuart.

The afternoon program on both Friday and Saturday will consist of brief reports of scientific studies now in progress or recently completed.

The joint dinner of Sections I and Q will probably be held on Friday evening, December 29, at which time the two retiring vice presidents will present papers.

### The Christmas Seal—A Help to School Children

Every year the National Tuberculosis Association and its affiliated associations, of which there are more than 2,000, carry on a sale of health seals at Christmas time. The appearance this month of the bright little penny seals is a potent reminder that tuberculosis is both preventable and curable and that it can be detected in children years before it becomes active.

It is estimated that tuberculosis infection is present in twenty-five out of every hundred children in this country, thousands of whom are apparently in the best of health, and show no physical signs of the disease. The only



way to discover whether or not infection exists is to administer the tuberculin test.

Children who react positively to this test are then x-rayed to find out the degree of infection that has taken place and those who need it are given the benefits of protective care. The discovery and care of these children is one of the important activities of tuberculosis associations.

Health instruction for pupils still is comparatively new for the public schools generally. In grade schools, responsibility for teaching health to children falls largely upon the regular teacher. In many instances she is not prepared for this responsibility. Many tuberculosis associations, which are supported by the sale of Christmas seals, use part of their funds to train school teachers in health teaching.

According to the official bulletin of the Illinois State Department of Health, the mortality rate from tuberculosis has taken an upward turn during the past year, which is the first time this has happened in many years. Those sponsoring the Christmas seal sale therefore are pleading for aid.

### Appointed Advisers to School Building Council

George F. Zook, U. S. commissioner of education, has announced the following appointments as university research advisers to the National Advisory Council on School Building Problems: Prof. N. L. Engelhardt, Teachers College, Columbia University; Prof. Ray L. Hamon, Peabody College, Nashville, Tenn.; Prof. Arthur B. Moehlman, University of Michigan, and Dean Paul C. Packer, University of Iowa.

### Rockford Schools Give Weekly Radio Broadcasts

The public schools, Rockford, Ill., are conducting a series of weekly radio broadcasts over the local station, KFVL. The purpose of the broadcasts is to acquaint the people of Rockford with the work carried on by the schools. Thirty-three broadcasts will be presented. They will cover the work of each department and the major activities of the school program.

### President Says Country's Schools Must Be Improved

In a radio address delivered from the White House to the third annual Women's Conference on Current Problems, meeting in New York City on October 13, President Roosevelt stressed the importance of restoring the useful functions of education at least to their predepression level. Excerpts from his talk follow:

"The other thought that I want to express to you is even more definitely along the line of education. It is true, unfortunately, that the economic depression has left its serious mark not only on the science and practice of education but also on the very lives of many thousands of children.

"Every one of us has sought to reduce the cost of government. Every one of us believes that the cost of government, especially of local government, can be reduced still further by good business methods. Nevertheless, with good business management and the doing away with extravagance and frills and the unnecessary elements of our educational practices, we must at the same time have the definite objective in every state and in every school district of restoring the useful functions of education at least to their predepression level.

"We have today, for example, a large surplus of so-called qualified teachers—men and women who even if we had full prosperity would and probably should be unable to find work in the field of education. Even today we are turning out too many new teachers each year. That is just as much an economic waste as building steel rail plants far beyond the capacity of railroads to use steel rails.

"It goes without saying that we should have enough teachers and not a large excess supply. It goes also without saying that the quality of teaching in almost every state of which I have knowledge can be definitely and distinctly raised.

"The main point is that we need to make infinitely better the average education which the average child now receives, and that, through this education we will instill into the coming generation a realization of the part that the coming generation must play in working out what you have called 'this crisis in history.'"

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### SUNLITE CAMBRIC\*

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Inter-twill is of unusual strength and durability. Especially recommended if more than ordinary wear is demanded of a window shade.

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Children in school today need not face the future with the handicaps of inadequate preparation—provided that every effort be made to protect them against those economies which decrease the school's capacity to educate properly.

By establishing complete, efficient control of minutes, International Electric Time and Program Systems effect dollar savings large enough to relieve the necessity for making expense reductions that may be harmful.

Teaching and administrative staffs are enabled to concentrate full attention to the actual problems of instruction without being burdened with the annoying and time wasting details of schedule and program maintenance.

Because of the Self Regulating feature, all clocks and bells in this system are automatically kept in unison day in and day out. They are checked for accuracy and agreement once each hour whether or not correction may be necessary.

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## In the Educational Field

S. H. SIMS is the new superintendent of schools, Belleville, Kan., succeeding R. L. MILLER, who has assumed charge of the school system at Scandia, Kan.

C. E. WILLIAMS has been appointed superintendent of the Buford School, Lancaster County, South Carolina.

CALVIN V. ERDLY, superintendent of schools, Hollidaysburg, Pa., has been named head of the school system at Hanover, Pa., succeeding F. M. HAINSTON, resigned, who will teach in the extension division of New York University.

OLIVE THOMPSON, superintendent of schools, Wyandotte County, Kansas, has been named superintendent, Kansas School for the Blind, Kansas City, Kan. FLORENCE JULIAN is the new head of the Wyandotte County schools.

E. M. PHILLIPS has been named to succeed the late J. M. MCCONNELL as commissioner of education for Minnesota.

RALPH KENCK has been appointed supervisor of trade and industrial education for Montana, with headquarters in Bozeman.

WILLIAM W. GARTIN, formerly superintendent of schools, Mountain Home, Idaho, has been appointed assistant state superintendent of public instruction for Idaho.

DONALD W. MACKAY, formerly superintendent of schools, Raton, N. M., has been appointed rural school supervisor for New Mexico, succeeding GRACE J. CORRIGAN. H. E. HARRISON has succeeded MR. MACKAY at Raton.

DR. JOHN LLOYD NEWCOMB, dean and acting president of the University of Virginia, since the death of DR. EDWIN A. ALDERMAN, became president of the University on October 1.

HORACE H. BEACH is now superintendent of schools, Sayre, Pa.

LINDLEY H. DENNIS, formerly deputy superintendent of public instruction for Pennsylvania, has been appointed assistant superintendent of public instruction for Michigan.

CHARLES E. HAWKES is now superintendent, Consolidated Grade School and Decatur County Community High School, Oberlin, Kan.

R. M. AUSTIN is the new superintendent of schools, Whitehall, Mont., succeeding W. J. LOWRY who is now high school principal at Anaconda, Mont. MR. AUSTIN was formerly head of the school system at Twin Bridges, Mont.

CARLTON E. DOUGLASS, assistant superintendent of public instruction, in charge of intermediate grades, Baltimore, has resigned. MR. DOUGLASS had been associated with the Baltimore schools since 1921.

HARRY W. MEAD, for more than twenty-seven years, superintendent, East Aurora High School, East Aurora, N. Y., died recently of heart disease.

HENRY M. WORLEY, former school superintendent who had taught in Kansas and Nebraska for more than forty years, died recently in Lincoln, Neb.

FRANCIS L. BACON, principal, Evanston Township High School, Evanston, Ill., has been appointed to succeed the late MILO H. STUART, Indianapolis, as a member of the National Committee on the Issues in Secondary Education, of the Department of Secondary School Principals.

H. L. SULLIVAN, superintendent of schools, Marietta, Ohio, has been elected president of the Eastern Ohio Teachers Association.

HOMER NEARPASS has been named superintendent of schools, Santa Barbara, Calif. During the past two years MR. NEARPASS has been engaged in educational research work in Los Angeles.

CHESTER A. ROSE has been named superintendent of schools, Whitley County, Kentucky, succeeding N. M. HILL, who resigned recently due to ill health.

SETH G. HALEY was recently appointed superintendent of schools, West Haven, Conn., succeeding the late EDGAR C. STILES.

HUGH KITSON has succeeded C. J. BARNUM as superintendent of schools, Woodland, Mich.

LEONARD ANDREA has been named superintendent of the Fairview School, Lexington County, South Carolina.

E. E. SKEEN is now superintendent of schools, Hollenberg, Kan.

W. T. BEALL was recently appointed superintendent of schools, Concord, Ga., succeeding W. B. SUDDETH.

W. C. PHILLIPS, superintendent of schools, Howard County, Maryland, died on October 13, as the result of a heart attack. He has been superintendent of the Howard County schools since 1900.

HANNAH A. KIEFFER, director of rural education, State Teachers College, Shippensburg, Pa., died on October 11. MISS KIEFFER had occupied her post at the Teachers College for the past thirteen years.

S. K. SOLLARS has been appointed to succeed the late W. E. ROYER as superintendent of schools, Sulphur Springs, Ohio.

W. L. ADAMS has been elected superintendent of schools, Sturgis, Mich.

J. W. CAMPBELL has been named superintendent of schools, Sedgwick, Kansas.

EDWIN L. BOLTON is the new superintendent of schools, Orting, Wash.

B. C. TROWT, formerly superintendent of schools, Jamestown, R. I., is now superintendent of schools, Narragansett, R. I., succeeding WILLIAM A. BRADY, who has retired. CLIFTON E. BRADLEY, formerly of Springfield, Mass., is the new head of the Jamestown schools.

G. E. KIDDER has been named superintendent of Joint School District No. 28, Lake and Missoula Counties, Ronan, Mont.

J. O. BOSTICK is the new superintendent of schools at Liberty, S. C.

B. B. CHAMBERS has been named superintendent of schools, Beckley, W. Va., succeeding H. E. CARMICHAEL.

R. S. CAIN was recently appointed superintendent of schools, Hampton, South Carolina.

C. R. BLAKELEY has succeeded C. D. BOOKER as superintendent of schools, Lexington, Okla.

BEN M. CHERRINGTON, professor of international relations and director of the Foundation for the Advancement





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### STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

OF THE NATION'S SCHOOLS, published monthly at Chicago, Illinois, for October 1, 1933.

State of Illinois } ss.  
County of Cook }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared James G. Jarrett, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Nation's Schools, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

Publisher: The Nation's Schools Publishing Co., Chicago, Illinois.  
Editor: Arthur B. Moehlman, Ann Arbor, Mich.  
Business Manager: James G. Jarrett, Chicago, Illinois.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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## In the Educational Field

of the Social Sciences, University of Denver, was granted a Ph.D. degree by Columbia University this past summer. The subject of his dissertation was "Methods of Education in International Relations."

DR. HARRY A. GARFIELD, president of Williams College, has tendered his resignation as head of that institution, effective June 30, 1934. DOCTOR GARFIELD has been head of the college since 1908. He was seventy years old.

DR. JOHN DEILL BLANTON, president of Ward-Belmont School, Nashville, Tenn., died on October 7 at the age of seventy-four. DOCTOR BLANTON had been president of the school since 1915.

ANDREW MCNIEL has been named superintendent of schools, Cawker City, Kan. MR. MCNIEL has been in charge of the school system, James-town, Kan., for the past six years.

R. L. JARVIS has been appointed superintendent of schools, LaCygne, Kan.

JAMES T. PITTS, principal of Hendrik Hudson School, Rochester, N. Y., died October 8. MR. PITTS, who was forty years old, had been principal of the school for nine years.

JAMES BRYANT CONANT was formally installed on October 8 as the twenty-third president of Harvard University. In striking contrast to the ceremony which has marked recent inaugurations, PRESIDENT CONANT'S accession to the post was extremely simple and was witnessed by only 150 persons.

DR. R. W. FAIRCHILD, school of education, Northwestern University, and formerly superintendent of schools at Elgin, Ill., has been elected president of the Illinois State Normal College, Normal, Ill.

### Wyoming Makes Study of School Problems

The Wyoming Education Association, through its committee on public information, has been active in the study of school problems created by the economic situation. The following studies have been completed or are in progress. Copies may be obtained by addressing Dr. W. C. Reusser, University of Wyoming, who is chairman of the committee:

"Can Wyoming Afford to Educate Its Children?" This study shows the increase in school enrollment and attendance and the increase in cost from 1922 to 1932. It also shows expenditures for education and for other public and private purposes.

"The Sources of School Revenue." This study shows the chief sources of school revenue in Wyoming and other states and gives a summary of the new forms of taxation in the several states.

"Wyoming School Budgets, 1932-33." This study analyzes the expenditures for the various budgetary items in the proposed budgets for the year 1932-33.

"More Education at Less Cost." This study analyzes the increase in school attendance and the decrease in school costs from 1926 to 1932.

"Are Wyoming Schools Costing Too Much?" This is an analysis of school

costs, wealth, income and taxation for Wyoming and other states.

"Decrease in Length of School Term." This study shows the extent to which the 1932-33 school term was shortened because of lack of funds.

"Class Size in Wyoming High Schools." This study compares the class size in Wyoming high schools in 1929 and 1933.

"Decrease in Salaries of Wyoming Teachers, 1928 and 1933." This study shows a comparison between the 1928 and the 1933 salaries.

"Comparative Statistics; Wyoming and Other States." This study shows a comparison between Wyoming and other states, gives school costs, wealth, income and taxation.

"Expenditure Norms for Wyoming Schools." This shows the percentage of school expenditures devoted to the various budgetary items in four groups of schools.

"Wyoming School Budgets, 1933-34." This study shows the increase or decrease in the school expenditures, teachers' salaries, numbers of teachers, and enrollment in 1933-34 as compared with 1932-33. (In progress.)

"Public Relations Program." This study shows the proposed reorganization of the public relations program of the Wyoming Education Association. (In progress.)

### Michigan Acts Upon Teacher Certification

At a recent meeting of the Michigan State Board of Education the following resolutions concerning the certification of teachers were unanimously adopted:

1. That all teacher training courses planned upon less than two years of full time residence instruction in the teachers' colleges be discontinued by September, 1934.

2. That a meeting of the representatives of all private and public teacher training institutions be called for a discussion of the teacher training and certification problems with a view to reporting their conclusions to the state board of education; that in conjunction with this meeting, the presidents and the secretaries be instructed to study the desirability of having the scholastic minimum grade for graduation conform with the university requirements.

3. That it be recommended to the legislature to consider favorably the centralization of the certification of all teachers in Michigan under the authority and supervision of the state board of education; that the superintendent of public instruction be instructed to take the necessary steps toward accomplishing this end.

4. That the curricula of the teachers' colleges be revised so that the instruction in the first two years of the four-year teacher training courses will parallel the general junior college course; that teacher training specialization be limited in these instances to instruction within the third and fourth years; that the enrollments within all teacher training curricula be limited by selection based upon certain prescribed scholastic and aptitude entrance requirements; that the secretaries and the presidents of the teachers' colleges be instructed to investigate scholastic and aptitude tests used for this purpose by other institutions and report their findings to the next meeting of the board.

5. That the state board of education, after the expiration of the present year, shall cease to grant the junior college certificate.

6. That the legislative council be requested to consider favorably a revision of the certification laws to conform with the foregoing resolutions.



## *A Greeting and a Pledge*

*W*ITH sincere appreciation for the opportunity of serving you, we of The J. B. Ford Company earnestly hope that the joys of a very Merry Christmas will usher in for you a New Year that will more than fulfill your highest expectations.

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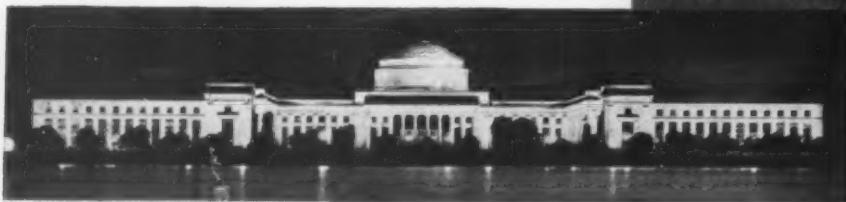
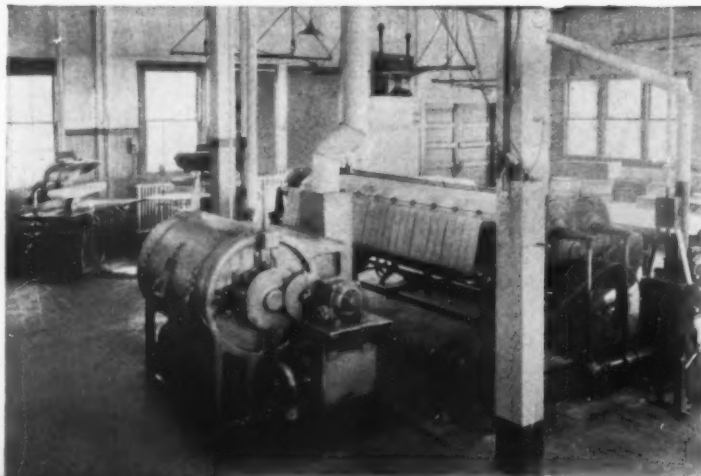


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For December, 1933

Side Glances—

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THE Cleveland meeting of the Department of Superintendence will probably be one of the best attended in years. Administrators should rally better than ever before at this crucial time in the history of public education. Cleveland is well located, easy to get into and hotel rates are reasonable. Robinson G. Jones' description of the community, its actualities and potentialities, sounds almost like an ode to California. The city was never better sold. In addition to Cleveland and its attractions, President Paul C. Stetson offers to the profession an unusual experiment in the way of a new type program. Make plans and reservations now if you have not already done so.

JUST now a scholarly discussion of the constitutional status of federal aid to education is most pertinent. Clarence E. Ackley believes that the entire question is one for congressional determination.

TWENTY-FIVE states, representing two-fifths of the country's population, now have state adoption of textbooks. Although there has been much discussion and ferment no new state has been added to the list since 1917. In these discussions the professional politicians are for state adoptions and the educators are generally against them. What does the future hold? The arguments pro and con are discussed fairly and calmly by Dr. Nelson B. Henry. What is your own experience? Brief suggestions from executives, arising out of their experience, might be helpful in attempting to solve this problem.



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**T**HE secondary school cafeteria has many educational values apart from its logical and sensible place in the program of health education. Except for building space most of these cafeterias are completely self-supporting. They are essential to the modern school because they permit the dietary needs of the children or the service aspect to precede profit, the natural aim of the corner store or lunchroom. Dr. S. M. Brownell describes some of the social values of the school cafeteria that are probably pertinent to any school system.

**P**RACTICALLY every child of secondary school age will some day be driving an automobile. This statement is not based on the hypothetical "two chickens in each pot" but on data supplied by the National Safety Council. Statistics also indicate that drivers under twenty years are involved in 39 per cent more traffic accidents than the average of all ages combined. Has the secondary school a responsibility for the young driver? Has safety education as valid a right to curricular position as gymnasium work, hygiene and swimming? Let's have your opinion. December is a particularly bad month for traffic accidents. Daylight is short and many of the days in the North cloudy and hazy. What is your school's accident record?

**M**OST school building codes hamper construction advance to meet changing educational needs, according to R. H. F. Halsey, vice president of the National Council on Schoolhouse Construction. He decries the silly attempts to standardize and crystallize by construction codes that are closed on both ends. Incidentally the peculiarities of many of these codes are legally responsible for much of the so-called extravagance in school buildings. After all, the purpose of a schoolhouse is to satisfy instructional needs in a manner compatible with safety and rationality.

**W**HAT are the states doing to meet present day educational need? Arkansas, for one, has set an example that might well be followed by others.

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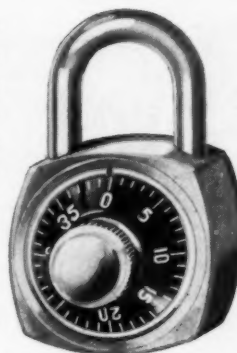
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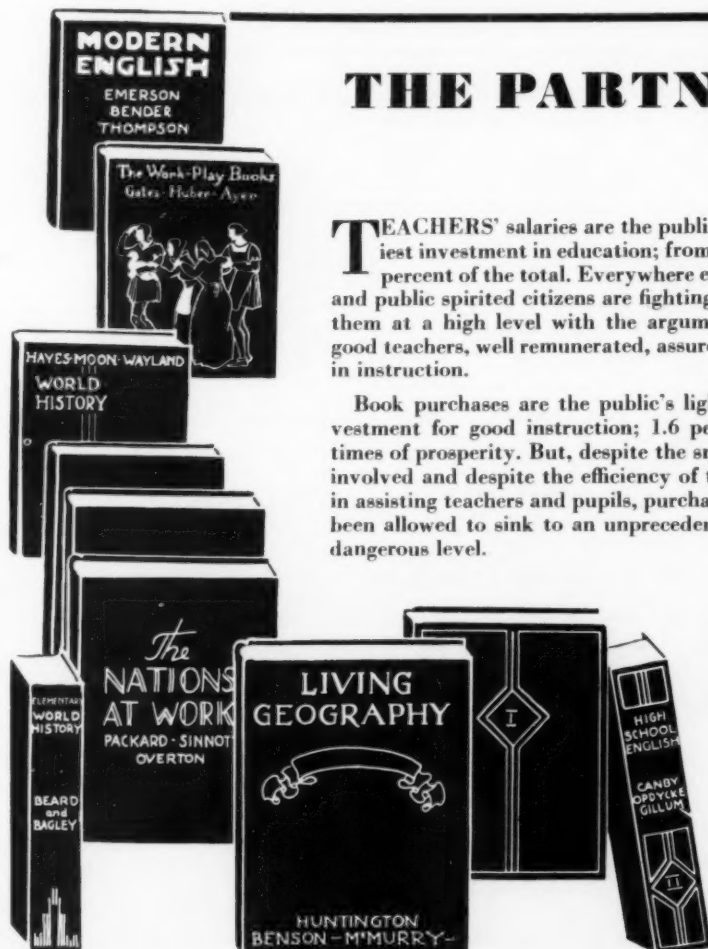
Without suitable books, the pupil wastes time, energy, and interest in *getting ready to learn*. His education, the purpose for which the whole expense of public schools is undertaken, suffers a severe loss of quality.

School patrons have become aware of the effects of the breakdown in the partnership between teacher, pupil, and book. They have learned that teachers must be supported with books—adequate in quantity and quality—if their children are to receive good instruction.

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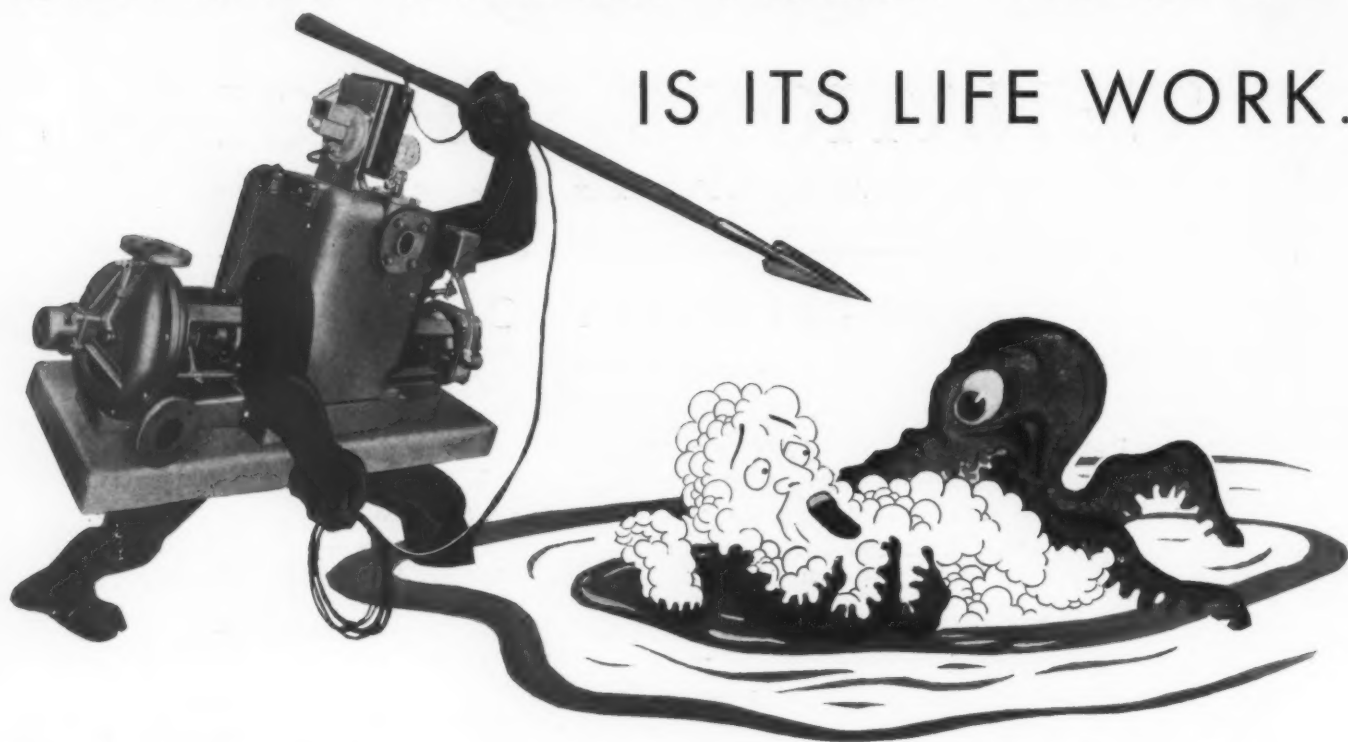
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requires no electric current.

The reason the New Jennings Vapor Turbine needs no electric current is because it is driven by a special Vapor Turbine which functions on a differential of only 5 in. of mercury. It works equally well on any type of heating system, regardless of whether it is run above or below atmosphere. And it is mighty economical, because the steam that operates the Vapor Turbine passes right back to the heating system with practically no heat loss. If you would like the exact figure, the heat given up by the steam in operating the turbine is  $\frac{7}{8}$ ths of 1% of the heat in the steam.

Now electric current, as every engineer knows, is the one biggest cost item in the operation of a vacuum heating pump. Cutting that out would be a big job, even if the pump, with the turbine, consumed a little more steam. But the wonderful thing about this pump is that it doesn't! It operates on steam, and yet it actually saves steam as compared with electric driven pumps of the same

capacity. This saving in steam is reflected in a marked decrease in fuel consumption reported by users of this new pump.

Any engineer will appreciate how it saves steam when we say that it is a highly perfected pumping device operating continuously, because it can operate continuously with economy. Continuous operation means continuous removal of air and condensate, i.e., the maintenance of uniform conditions in the return line. And uniform circulation means steam saving.

We could tell you of many other ways in which the Vapor Turbine is economical. Cost of lubrication and maintenance is practically nothing. Little floor space is required. No expert attendance is needed.

But why don't you send for Bulletin 203 and learn all about this new way of keeping every radiator at top-notch heating efficiency, and with economy.

**THE NASH ENGINEERING COMPANY**  
SOUTH NORWALK, CONNECTICUT, U. S. A.